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Volume III (Old Series Vol. XVII) **DECEMBER, 1910** **Number 11** (Old Series No. 5)

THE SOUTHERN MEDICAL JOURNAL

JOURNAL OF THE SOUTHERN MEDICAL ASSOCIATION

INCORPORATING THE GULF STATES JOURNAL OF MEDICINE AND SURGERY AND MOBILE MEDICAL AND SURGICAL JOURNAL

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TABLE OF CONTENTS

Proceedings of the Southern Medical Association at the Nashville Meeting 1

ORIGINAL ARTICLES.

Safeguarding Society from the Unfit. By *A. B. Cooke, M. D.*, Nashville, Tenn..... 15
Exopthalmic Goitre. By *W. D. Haggard, M.D.*, Nashville, Tenn. 22
Some Therapeutic Indications for Thyroid Administration. By *James McCaw Tompkins, M.D.*, Richmond, Va..... 28
Some Pharmacological and Clinical Aspects of Hexamethylenamine. By *Leslie Byron Wiggs, M.D.*, Richmond, Va. 32
A Resume of Cases of Malaria, and of Cases Suspected to be Malaria, Examined in the Past Three Years. By *J. M. Swan, M.D.*, Glen Springs, N. Y. 37
Pain in Abdominal Disease. By *William M. Harsha, M.D.*, Chicago, Ill. 43

EDITORIALS.

Announcement. *J. A. Witherspoon, M.D.*.. 47
Consolidation 48
Salutatory 49
Our Advertisements—Explanation 49
The Nashville Meeting 50
Notice! Increase of Dues..... 53
The New President of the Southern Medical Association 54
Post-Operative Cystitis 54
Food Value of Fish 55
Anaphylaxis 56
Anti-Typhoid Inoculation 57
Death of Mrs. J. F. McKinstry..... 57
Words of Encouragement 58

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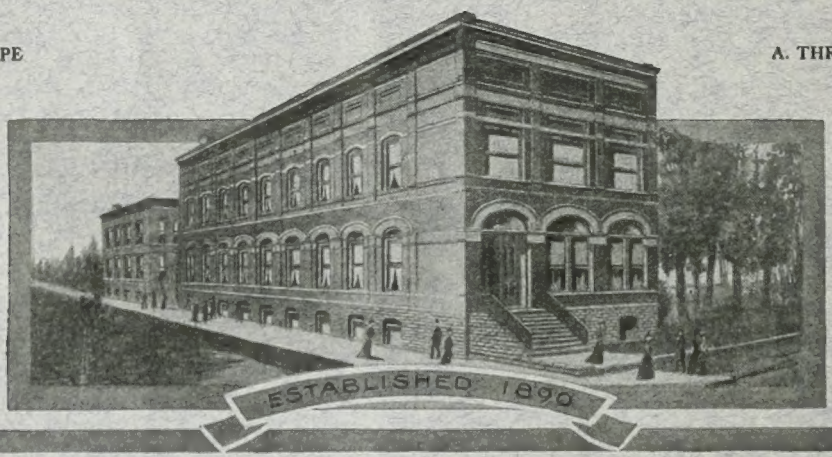

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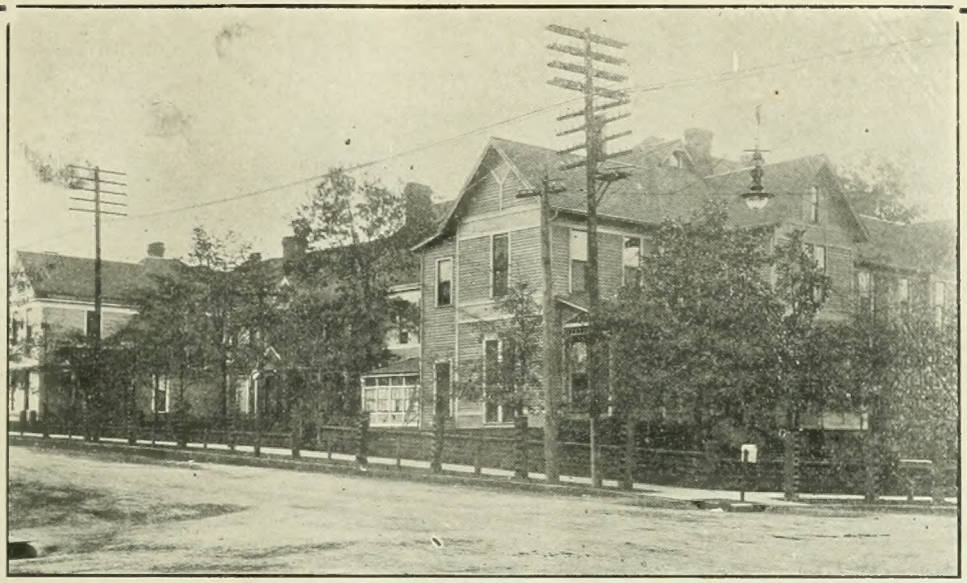

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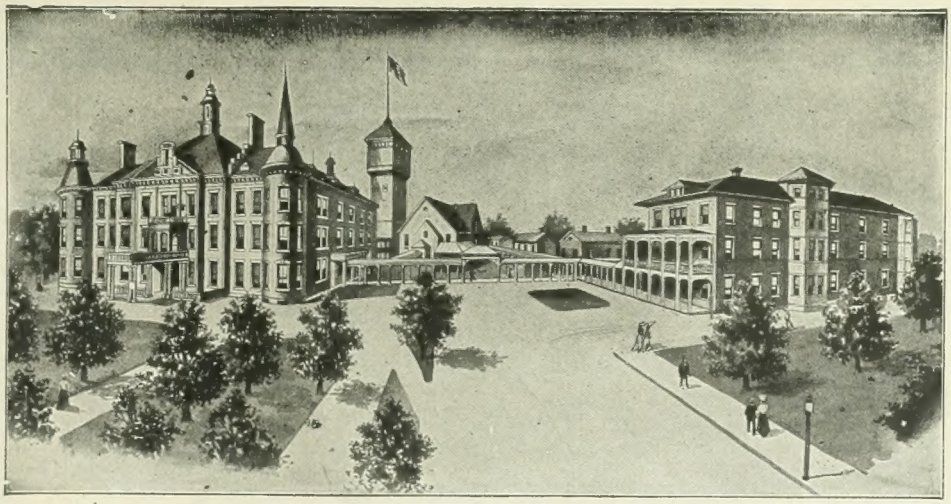

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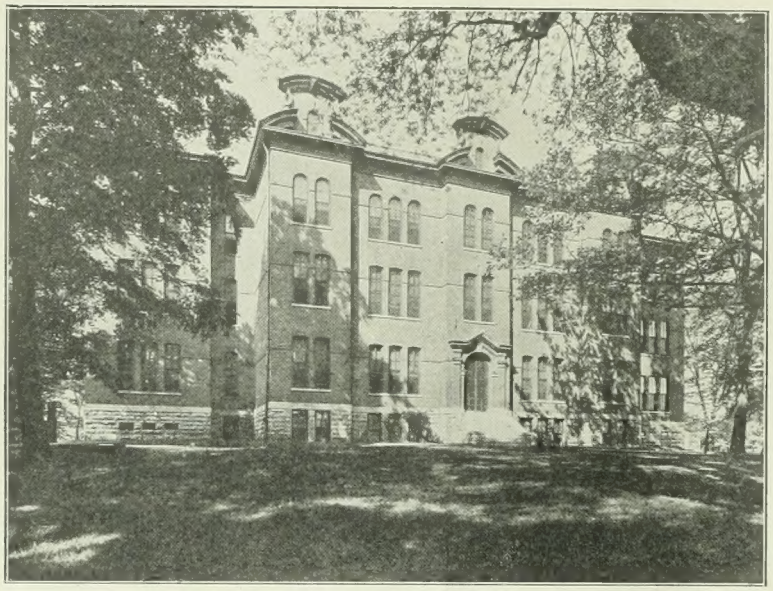

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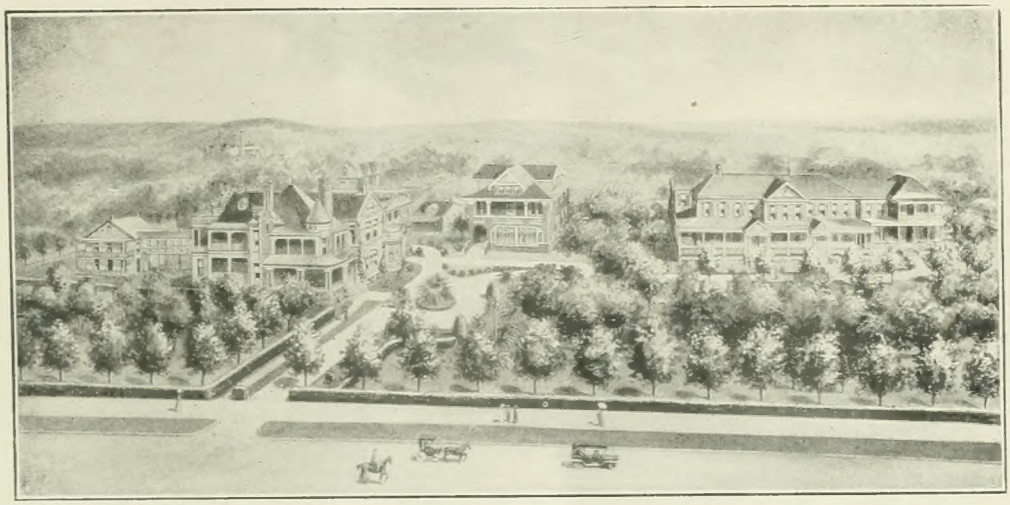

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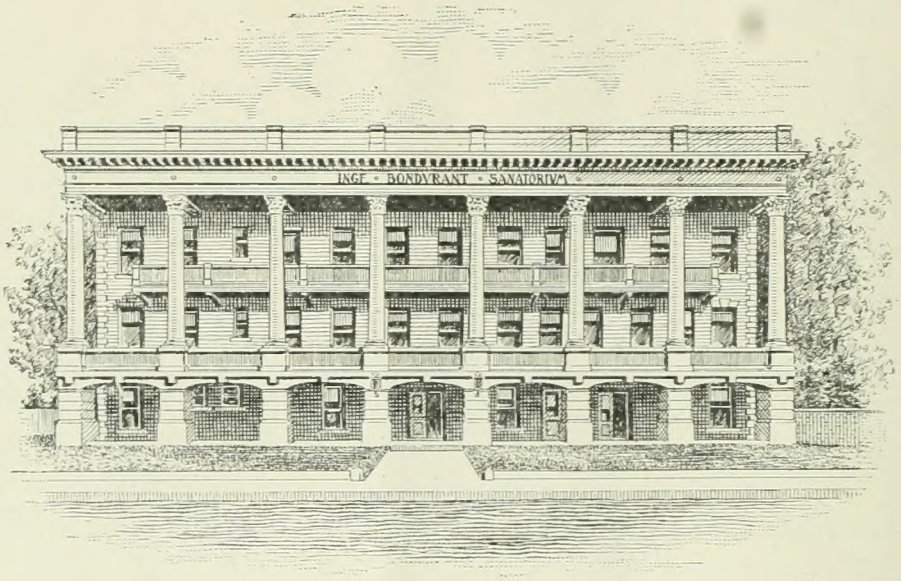

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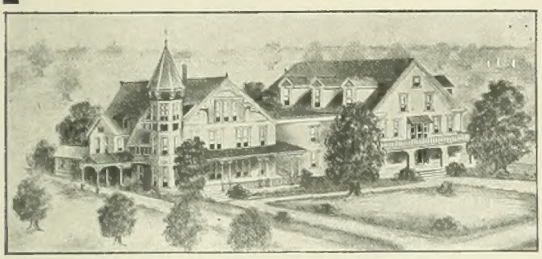

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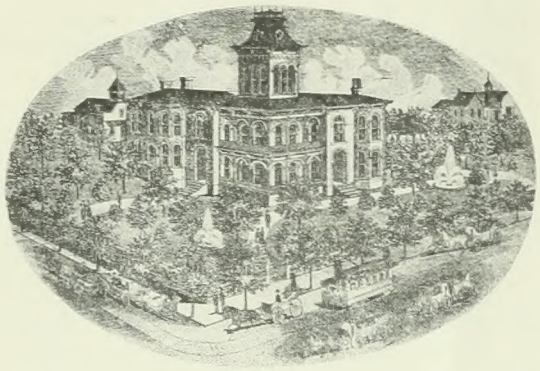

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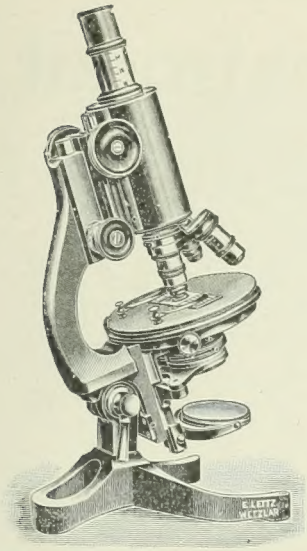

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SOUTHERN MEDICAL JOURNAL

PUBLISHED MONTHLY

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Proceedings of the Nashville Session Southern Medical Association, Nov. 8, 9, 10, 1910

MINUTES OF THE FOURTH ANNUAL SESSION

FIRST GENERAL MEETING, TUESDAY, NOVEMBER 8, 1910.

The first general meeting was held in the Auditorium of the Y. W. C. A., Nashville, Tenn., and was called to order at 10 a. m., by Dr. G. C. Savage, Chairman of the local Committee of Arrangements.

Dr. R. M. Inlow, Pastor First Baptist Church, Nashville, delivered the invocation.

Dr. William D. Haggard, of Nashville, was then introduced and delivered the address of welcome.

DR. HAGGARD'S ADDRESS.

"Mr. President and Gentlemen of the Southern Medical Association:

"It is with extreme pleasure on behalf of my colleagues in the City of Nashville and the State of Tennessee that I bid you welcome, thrice welcome. It is indeed a great honor and one of which any city might be proud to entertain such a splendid body, representing, as it does, the flower of Southern medicine and surgery.

"You are members of a profession whose ideals are altruistic and beneficent; whose self-sacrificing devotion to duty in the prevention of human ills, the amelioration of their suffering and the increase of health, happiness and well-being will ever entitle you to the highest consideration at the hands of your fellow-beings.

"Only once before has Nashville been so highly honored in the assemblage of so many distinguished men of your profession. That was the meeting of the American Medical Association, of which this organization is a daughter and of which she may well be proud. We are honored at having you among us today, as this signalizes the first convocation of your association in the grand old Volunteer State, and we hope to have many happy returns of this meeting. We extend to you, therefore, an ardent Southern welcome on this, your first visit. May it be as instructive, far-reaching, and beneficent in its results, as it is pleasing, illuminating and inspiring to us.

"Nashville is the alma mater of many Southern doctors. She has gloried in her sons whose return she so greatly enjoys. Nashville has been the home of many notable examples of the noblest and best for which our profession stands. She recounts with pride the illustrious names of Bowling, of Eve, and of Briggs, all three of whom it gave to the American Medical Association as Presidents. You are sitting within a stone's throw of the former homes of each of these great men. Let the memory of their achievements and those of their colleagues who wrought with them be a benediction to this band of earnest workers in the science of humanity.

"The city which has the honor of entertaining you is situated in the middle basin of the blue grass region and has been described by a distinguished poet in his songs and stories of Tennessee, as "the dimple of the universe."

"He tells us that away back in the past it was once the bed of a silvery shining lake—and what became of it. Perhaps an earthquake rent its natural levees and it fled with the Cumberland or the Tennessee to the gulf.

Perhaps the mighty Mississippi brushed with his rough waves too closely to the western border of our calm lake one day and she went with him, a willing captive to the sea. * * * The lake is gone. But when it went it left the sweet richness of its farewell kiss upon the lips of our valleys and the fullness of its parting tears on the cheeks of our hills. It made the loam and the land, the spirit and the springs, the creeks and the cream of the middle basin of Tennessee'—and it is to this garden spot of the world that we welcome you.

"Nashville is equidistant from three hallowed spots in our beautiful Southland, which has meant much to the development of surgery. In Montgomery, in an office in the corner of the yard, J. Marion Simms made lacerated woman whole and became the father of gynecology. And the scene of the first ovariotomy by Ephraim McDowell, was in Danville, Ky., just 100 years ago. Georgia was the home of Crawford W. Long, who was the first man in the world to use chloroform as an anaesthetic.

"It may be unknown to some of you that in the neighborhood of the Hermitage, where we hope to take you on Thursday, that Ephriam McDowell in 1822, performed his ninth ovariotomy, a score of years before the profession knew that such a thing was possible. He rode horseback from his home in Kentucky and no less a personage than Gen. Andrew Jackson assisted him at the operation. The patient was a Mrs. Overton, who thanked God and honored Dr. McDowell for her recovery.

"When the surgeon presented the check which her husband had given him, at the little bank on the Public Square, the cashier counted him out $1,500. He returned the money, saying he had told Mr. Overton that his bill was only $500. A runner was dispatched to the Hermitage, who returned with the message from the husband saying that he had understood the amount of the Doctor's charge, but had tendered him this additional honorarium with his thanks and with the earnest request that he accept it. This is a feature of surgery, I regret to say, that is not practiced in Nashville at the present time.

"This building in which you are assembled stands in the corner of the yard where stood the mansion of ex-President James K. Polk. It may be of interest to you to know that when he was a callow youth of 19 years he journeyed from his home in Maury County to Kentucky, where Dr. McDowell relieved him of a stone in the bladder. After he had been exalted to the position of Chief Executive of this great nation he was not unmindful of the life-saving service rendered him by the operation which had made his career possible.

"To this beautiful city, with its historic traditions, the capitol of our beloved State, to our hearts and homes, we welcome you with outstretched arms and bid you God-speed in this great work which lies before you."

The response to the address of welcome was delivered by Dr. Seale Harris, of Mobile, Ala.

Mr. President, and Gentlemen of the Southern Medical Association:

I am at a loss to understand why I have been called upon to respond to the address of welcome in behalf of the Southern Medical Association, because I am sure that the Committee of Arrangements must know that I am not in the least endowed with the divine gift of eloquence, and therefore unfitted to represent this great Association in the capacity of a speaker. I have a faint suspicion that my selection is a conspiracy on the part of my friend Haggard, who has a wide reputation as an oratorical surgeon. He probably had the committee to select me for the reason that he knew I was to follow him, and that by comparison his speech would stand out in bold relief in all its oratorical and rhetorical splendor.

"Though I regret that one more fitting was not selected to express this Association's appreciation for the cordial welcome extended to us, I am sure that I voice the sentiment of every one present in saying that we are delighted to be your guests and that we regard

it a rare privilege to be associated with, and be entertained by the citizens and the splendid medical profession of the City of Nashville and the State of Tennessee.

"Nashville has much to be proud of, and she deserves her reputation as being one of the most cultured, prosperous and progressive cities in our fair Southland; but no class of her citizens has added more luster to her name than her physicians and surgeons. Indeed I will say that no city of twice its population, in all of this great country of ours, has done more to advance the cause of medicine and surgery, and none has given more illustrious names to medical history than Nashville. As evidence of this, I have but to point to the two great medical schools that have been built up in your city, and to mention the names of Briggs, Eve, Haggard, Douglass, Bowling, and others of "those immortal dead, who live again in our minds, made better by their presence." Regard for the modesty of many of my hearers forbids my discoursing upon the achievements of those who are today upholding Nashville's proud reputation as a medical center. It is enough to say that all of us know you have among the members of your progressive medical profession men who are known wherever the science and art of medicine and surgery is practiced.

"It is a delight to us to know such men as you have here, and we are glad of the opportunty of coming to Nashville. We will admit that we are willing to leave our work, and even our wives, for a brief period, to come to Nashville, though we know that for 'ways that are dark and tricks that are vain,' in genuine hospitality, the Nashville doctors deserve the palm.

"Doctors, more than any other class of men, need recreation. They have long hours and they must necessarily be irregular in their habits of eating and sleeping. Their work requires the most exhausting physical exertion and the most intense mental effort; and their responsibilities are great because they know at all times that human lives are dependent upon their skill and learning. Indeed the doctor's life is a hard one. Apropos of this is a story that is told on an old Georgia doctor, who on one occasion was asked, 'If doctors ever got to Heaven?' He replied. 'Yes, every doctor goes to Heaven when he dies. When a doctor dies and his soul goes up to the pearly gates, and there knocks for admission, St. Peter says, "Who comes here?" He replies, "A doctor who did his duty on earth." Then St. Peter cries out in a loud voice: "Sound ye the trumpets and let angels sing his praises! Let the doctor enter and take a high seat in heaven, for he had a hell of a time on earth!" '

"This story is told with the hope that it will give you the comfort it has me in the "wee small hours" of the cold and stormy nights when I have been called out of my good and warm bed to see little Willie with the colic, or Sue with the hysterics. I have thought of the happy future that is waiting for me and of the good doctors that I should meet in a better world, and have been comforted.

"Some think that certainly a part of the joys of heaven are to be had on this earth. If so, attending meetings of medical societies should be a part of a doctor's heaven, because there we leave behind us all the annoyances and disagreeable duties of a doctor's life. All of us are here for the same purpose, i. e., the pleasure of mingling with our fellow-workers and the opportunity of learning all that we can about our profession. There is, therefore, no conflict of interests, and no petty jealousies which are said to exist among doctors in the practice of their profession.

"Aside from the opportunity that they give of associating with the finest set of men on earth, medical societies are distinctly educational in their functions. Indeed they are the great post-graduate schools for physicians, and Dr. Nicholas Senn said that medical journals should be the doctor's text book.' It is not for me to say that the Journal of the Southern Medical Association deserves to be regarded as a text book, but I will say that this Association has done much to keep the

Southern physicians abreast with medical progress. Take for instance the disease, pellagra. There is not an American text book in existence that devotes a page to the discussion of that most important disease, while the physicians who attended a meeting of this Association last year, and who were present at the symposium and clinics on pellagra arranged by the officers of this Association and the New Orleans physicians, are thoroughly familiar with the manifestations of the disease. The same is true of those who have read the many excellent articles on pellagra that have been published in several medical journals.

"It is progressive physicians who are actively identified with the work of medical societies, and the Southern Medical Association is particularly fortunate in having among its members most of the leading physicians and surgeons in the South, men who are interested in the future of this organization. I will add that the physicians of Nashville deserve much credit for their part in the upbuilding of the Southern Medical Association. I believe that this organization is destined to play an important part in the progress of American medicine and surgery. Indeed I am convinced that in a short time it will be recognized as second only to the American Medical Association, which is without doubt the greatest medical organization in the history of the world.

"In behalf of the Southern Medical Association, I thank Dr. Haggard for his cordial and eloquent words of welcome, and again let me assure you that we regard it a great pleasure and a rare privilege to hold our deliberations in this city."

At the conclusion of the response by Dr. Harris, Dr. Savage introduced the President of the Association, Dr. W. W. Crawford of [illegible], Miss., who took charge of the meeting.

Dr. Savage, Chairman of the Committee on Arrangements, announced the places of meeting of the various sections, the entertainments, and the trip on Thursday afternoon to the Hermitage, where he said an address would be delivered by Dr. John A. Witherspoon, of Nashville, on Andrew Jackson.

The Council asked for further time to make its report, which was granted.

Dr. Oscar Dowling, of Shreveport, presented a partial report as Treasurer, and stated that the remainder of the report would be presented before the close of the meeting:

"Mr. President, and Gentlemen of the Southern Medical Association:

"I did not fully realize the magnitude of the work of the Secretary-Treasurer until a few days ago when attempt was made to compile some statistics.

"After repeated requests barely 300 members, out of 805, paid their dues for the current year. Of course several will pay during this meeting. Numbers have never acknowledged communcations from the Secretary-Treasurer, though of the delinquents, excepting 10 resigned, 4 refuse to pay, 4 can not be located by the Postoffice Department, 1 desires to resign without payment of back dues, 3 have removed from our jurisdiction, 3 disclaimed membership, 4 remain doubtful and 3 have passed over the river since the New Orleans meeting.

"The removal of Dr. George Dock left vacant the vice-presidency for Louisiana, which was filled by the President by appointing Dr. E. M. Hummel, of New Orleans, and that of Chairman of the Section on Medicine by appointment of Dr. William Litterer, of Nashville.

"Our Constitution and By-laws provide that no name shall appear on the program unless in good standing. The Section of Medicine contains the names of 17 contributors who may comply with this section at the registration desk, and the section on Surgery shows 14 in the same delinquent condition with the Ophthalmic Section exhibiting 6.

"The fraternal links which bind us together have been loosed in death by three of our broth-

ers, full of years of honor and loving service to our profession and to humanity, and in their passing they have left us a memory, the example of pure and honorable and useful lives.

"Drs. Harris and Moody, Editors and Publishers of our official organ, have given us faithful and liberal service, and I am indebted to them for valuable aid.

"To our worthy President and enthusiastic Chairman of the Council, with the other members of the Council, vice-presidents and section officers, and last but not least our father, Dr. Giles C. Savage, I am under renewed obligations and acknowledge debts of gratitude for wise counsel and advice during the year.

"For the Secretary-Treasurer, I hope the membership, in future, will show a little more consideration by making prompt response to all communications—especially those calling for dues.

"On our books today there are 140 who owe one year's dues, 178 owing two years, 100 owing three years and 3 for four years. Some seem inclined to take exception when a bill is mailed them and act as though it were a personal matter between him and the Secretary-Treasurer. Bear in mind that the Secretary-Treasurer is an unpaid servant. Let me commend to the delinquents an increased spirit of fraternity.

"In closing both my report and my active connection with you as an officer, I want to express my feelings of sincere friendship and good-will to you and my earnest desire to see the Association grow by leaps and bounds—an oft-expressed wish; my heartiest thanks for what you have done, despite the knocks of some, to make my life happier at all times for having been your servant, and to wish you individually and collectively, nothing but success and prosperity "now, henceforth and forever."

This world that we're living in
Is mighty hard to beat;
You get a thorn with every rose,
But ain't the roses sweet?

"It was in Nashville I received my medical degree, and it is in Nashville, among pleasant surroundings and delightful recollections, I offer you my resignation."

Dr. John B. Murphy, of Chicago, President of the American Medical Association, was then introduced and delivered an address on "The Surgery of Bones and Joints," and, among other things, said that when there is a lesion in the neighborhood of a joint which causes inflammation or thickening, or adhesion of the capsule, if the surgeon wants to overcome the subsequent deformity the capsule must be dealt with as one would deal with bone or with any other inelastic material. The outer fibrous capsule has a feeble vascularity. It practically never becomes inflamed; it is never the seat of a primary lesion. It never becomes tuberculous. It has an inner lining which is known as the synovial membrane. The surface is covered with endothelial cells, which are arranged close to each other, and they seal up the surface of the synovial membrane just as accurately as the epithelial cells seal up the surface of the skin. He found in his experiments on dogs that if he wanted to infect a joint with the most virulent type of pneumococci, if he injected half a syringe full of the virulent micro-organisms into a joint with a very fine needle, and without traumatizing the synovial membrane, it would produce no effect whatever in that joint. On the other hand, if he took the other half of the same syringe barrel of infective material and injected it into another joint in the same dog, and with a fine hypodermic needle which scratched the surface of the joint so as to tear loose the endothelial cells that cover the surface, this would be followed by infection phlegmon and death. This means that if surgeons are going to do work on joints, one of the things they must observe is that the joint has an enormous resistance against infection, and they must become the greatest respectors of this endothelial layer in all work that involves the surgery of the joints. He found that if he injected a joint with turpentine a day or two in advance,

or if he injected the joint with tincture of cantharides a day or two in advance, and the next day injected the virulent micro-organisms, the dog would die from phlegmon and sepsis. Again, if he injected the joint six or twelve days before with a two per cent solution of formalin and glycerine, then he could inject the joint with virulent pneumococci and tear it up and not the slightest effect would be produced, because the chemical inflammation produced a cofferdam of all the lymph spaces beneath the endothelium making it impossible to infect the surface. Therefore he could by this means render the joint surface immune by injecting it with some mild chemical irritant from five to ten days before he operated. The time to attack a joint is when nature or the surgeon has artificially prepared the joint in rendering it immune against easy infection.

Speaking of ankylosis, he said, it can be avoided in practically every case of acute metastatic infection or inflammation of joints. The moment the practitioner undertakes the drainage of joints that are infected, he is assuming responsibility for an ankylosis. If we have an infection in a joint, to save it from destruction, it is necessary to relieve the joint of the tension of the products of infection; this can be done by aspiration. But what one can do to give the patient more relief than a hypodermic injection of morphine is to put on Buck's extension and separate the pressing surfaces from each other that are inflamed, thus avoiding ankylosis and relieving at the same time.

Dr. Murphy reported several cases on which he had operated with gratifying results, carrying out the principles mentioned.

He lays down the law that no synovial surface can be exposed to air for any considerable length of time, through drainage tubes, without having its endothelial surfaces destroyed and producing an ankylosis.

On motion the general meeting then adjourned.

SECOND GENERAL MEETING.

The second general meeting was called to order at 8 p. m., by Vice-President Dr. Frank A. Jones, of Memphis, Tenn.

President Crawford delivered his address.

Gentlemen of the Southern Medical Association:

"In selecting me as your President a year ago you conferred an honor, for which I am profoundly grateful.

"I count myself doubly fortunate tonight in that I am not only the presiding officer of a militant organization, but have the privilege of enjoying the hospitality of one of the South's most delightful cities.

"In your Academy of Medicine, composed as it is of men who have made their impress upon the medical thought and achievement of this country, loyal as you have always been to existing medical societies, appreciating as you did that the American Medical Association, with all its comprehensiveness, and all its tremendous economic value to the profession, was not meeting every demand that was being made upon it, and realizing that the individual units entering into its structure approached perfection, but that the structure itself lacked completeness, you dreamed of a plan whereby the great temple might become a completed product, and at your suggestion the president of the State societies of Tennessee, Georgia, Florida, Alabama, Louisiana and Mississippi sent representatives to Chattanooga in November, 1906, to meet with the Tri-State Society of Tennessee, Alabama and Georgia and discuss the practicability of organizing a Southern branch of the American Medical Association.

"The Tri-State Society accorded the representatives a most courteous reception, and although it had been in active existence for eighteen years, agreed to relinquish its charter and become the nucleus for the Southern Medical Association.

"That your dream and their acquiescence was not a mere phantasy, the continuous ex-

pansion of this organization and the personnel of its membership eloquently attest.

"So as we come home to you for the first time it is with the hope that you will recognize that your offspring has utilized the very best quality of nourishment available. That you will applaud whatever of good you may find in us, and when you shall have rendered a judicial estimate of our attainment, you will help us to discard whatever of bad you may find in us, and direct us into larger channels of usefulness.

"While, in the common vernacular, the Southern Medical Association has made good, it has not succeeded in gaining recognition from the American Medical Association. At each of its last three annual meetings a committee from our association has made overtures to that organization for nominal recognition, but each time our efforts have met with failure. The first year we were given to understand that we would be expected to adopt a Constitution and By-laws suggested by the Secretary of that organization. The document submitted had so many features that were not suited to the purposes of our Association that we were forced to reject it.

"The second year's effort was equally unfruitful.

"Your President and Chairman of the Council went before the Committee on Medical Organization at the St. Louis meeting last June, but again met a Waterloo. Perhaps our failure the last time was in some measure due to our lack of data. We did not have a copy of our Constitution and By-laws. This was not due entirely to negligence, but rather to our impression that a copy was already on file with them.

"Our Association has only asked for a nominal relation with the American Association. A large percentage of our membership are members of that body, and are loyal to its tenets. Most of us have felt that as a branch of the American Medical Association we would supply what is manifestly a missing unit.

"Any further activity in that direction must be decided by you gentlemen.

"Whether the Southern Medical Association shall finally sustain the relation to the American Medical Association that its originators had planned or not, we feel that our organization has become a definite and fixed factor in the medicine and surgery of the South.

"We are sure that there is an important reason for our existence and a large opportunity for our activity. But in order that we may obtain a maximum of result, our work must contemplate more comprehensive effort than the dominant thought that an annual meeting with a program of scientific papers, however meritorious, constituted our only apology for existence.

"There are many defects in our present system of professional economics that merit our best thought. Our intelligent concept should then be translated into a consistent effort at the correction of these defects. The proper execution of this task does not rest solely in the hands of any one man, or set of men, however competent, but must witness the active and harmonious co-operation of the entire profession.

"We are living in an era when conservation is emblazoned upon the lintels of every department of human endeavor.

"We submit that nowhere does it find such a high degree of possible attainment as in the field of medicine. In fact, all conservation in its final analysis points to a healthy physical organism.

"We applaud the advances that have been made in our system of medical education during the past decade. There is much yet to be attained. It is not enough for us to be able to say that there are a few good medical colleges in our midst. Our full duty shall not have been discharged until we shall witness the disappearance of the last inferior one.

"A degree in medicine conveys the same idea of qualification to the minds of most laymen, whether it be possessed by one who is an A. B. graduate from a university, and has

his doctor's degree from a high grade, well-equipped medical college, or whether on the other hand he be deficient in literary training, and holds his diploma from some obscure school with no standing either at home or abroad.

"This most deplorable situation has been fostered by the existence of a large number of poorly equipped medical colleges, whose only apology for existence is the exploitation of those who regard professorships as the sine qua non of existence, and those students whose highest ambition is to acquire a diploma by the easiest possible means, absolutely disregarding the importance of scientific attainment.

"The proper adjustment of this question must contemplate our four-fold educative need, viz.:

"1. The profession must be made to appreciate that an over-production of medical colleges means an over-production of poorly equipped doctors.

"2. The layman must be brought to realize that there is a difference in medical degrees, so that he may demand higher standard.

"3. Our State legislatures must be awakened to their responsibility.

"4. And last, the medical student himself must be convinced that the best is not too good for him.

"So much has been said by the medical press recently on the subject of consolidation and higher standards for our medical schools, that I need not elaborate on that point.

"I congratulate Nashville that her profession has already begun the process of consolidation, and I predict that at no distant date all your effort will be concentrated upon one great school, greater in its achievement than the sum total if the divided forces, greater because of the more liberal supply of clinical material, greater because of united effort.

"It is contended by some that the elimination of the smaller and cheaper schools is a sociological question that it will mean the exclusion of the young man with limited means from the study of medicine and thereby deprive the profession of the class of recruits whose high content of rich red blood has helped to give our vocation its present exalted position in society.

"There is, without doubt, a certain amount of truth in this contention, but it is only relatively true.

"The aggregation of students in a few schools conducted solely for the purpose of yielding the largest possible returns to the student body, should reduce the per capita cost of instruction, and thus place the fees within reach of the young man of limited means.

"The enormous amount of detail work in sanitary prophylaxis that is being accomplished by our State Board of Health, through the co-operation and financial aid of the Rockefeller foundations, will help to bring the laity, and especially that portion that so much need instruction, into an intimate and sympathetic relationship with our profession.

"The public will be brought to a full realization of the altruism that has always characterized our professional activity.

"Boards of Health may direct, but in order to bring this work to its best fruition, the family physician must believe in and endorse the propaganda. It is here that our organization will find an opportunity for service. Instead of the isolated effort of one State society, this Association can so stimulate and direct the work that it shall move forward in six States with perfect unanimity until rural inhabitants and the city-bred alike shall have an intelligent concept of professional skill and correct living.

"A properly aroused and educated public conscience will mean intelligent legislation. It is a singular fact that physicians as individuals are regarded as the highest type of our citizenship, but collectively, are looked upon with suspicion by our State legislatures. The average legislator relies implicitly upon the statements and conduct of his family physician when the life of his child is involved but can not comprehend the logic of the doc-

tor when he asks him to enact laws that will safeguard public health, and thereby minimize the necessity for the doctor's existence.

"The logical outgrowth of an evolution that shall give us fewer and better medical colleges, and awakened public ,and proper legislation, will be a young manhood of a higher standard and more ambition for the study of medicine. When society shall have reached such a state of advancement, only those who are willing to devote their lives to serious and persistent study will be attracted to the field of medicine.

"Finally, in order that we may achieve the maximum of result in the minimum amount of time, it shall be necessary that we maintain an official organ, whose intrinsic merit shall commend it to the profession. A journal that shall be sought after by non-members, many of whom though now indifferent to our organization, shall through this means be brought to a full appreciation of the beneficent results of medical co-operation, and thereby be added to our membership roll.

"We appreciate the present degree of excellence of our journal, and believe that its continuance under the existing able management will guarantee a satisfactory channel for our expansion. We believe, however, that its field of usefulness will be materially broadened if an arrangement can be perfected whereby all the leading medical journals in this teriority can be combined with one whose superiority shall give it a passport into every doctor's library in the South."

Dr. H. H. Martin, of Savannah, Chairman, presented the following partial report of the Council:

The Council was called to order by the Chairman, Dr. H. H. Martin, at 5 p. m., November 8th, 1910.

There were present Drs. Cooke, Crawford, Dowling and Wyman.

The incoming President should name a councilor from Florida, and one from Louisiana.

The Council recommends that Article 3, Section 3, of the Constitution be amended, so as to read. "Not more than three guests shall be invited to present a paper before any section."

The Council recommends that Article 7 of the Constitution be amended to read as follows: "The officers of each section shall consist of a Chairman, Vice-Chairman and Secretary, elected annually by the members of the respective sections, such election to be held before final adjournment."

The Council recommends an amendment to Article 10 of the Constitution, substituting the word "presented" for "made," to be laid over until the next annual meeting.

The Council recommends the following amendment: "The Association shall hold an annual session in the autumn at such place as has been decided upon at the preceeding annual session, and shall remain in session not less than three days. The date of the meeting shall be determined by the Council."

The Council recommends that the words "of an ethical nature" in Section 2, Chapter 6, of the By-laws be stricken out.

INCREASE OF DUES.

The Council recommends that "the dues of this Association shall be $3.00 per year, payable annually in advance." " The fiscal year of this Association shall be from one annual meeting to the next annual meeting."

The Council recommends that the phrase "Southern Branch of the American Medical Association" in Article 1 of the Constitution be stricken out; also that the word "branch" in Section 2, Article 3 of the Constitution, be stricken out.

On motion, the Council then adjourned to meet at 6 o'clock on Wednesday evening.

Dr. Martin stated that the recommendations and amendments presented by the Council would be brought before the general meeting again on Thursday for action.

The following Committee on Nominations was announced:

Georgia—Dr. H. H. Martin.

Florida—Dr. U. S. Bird.
Mississippi—Dr. A. G. Payne.
Louisiana—Dr. Isadore Dyer.
Alabama—Dr. E. P. Sims.

Secretary Dowling read letters and telegrams from several members regretting their inability to attend the meeting.

Dr. A. B. Cooke, of Nashville, read a paper entitled, "Safe-guarding Society from the Unfit." (Dr. Cook's address appears in full in another part of this Journal.

This paper was discussed by Drs. George H. Price, Nashville; Oscar Dowling, Shreveport; John H. White, New Orleans; J. L. Crook, Jackson, Tenn., after which Dr. Price presented the following resolutions:

WHEREAS, The medical profession of the South believes that its highest office is to prevent disease and its most sacred obligation to safeguard those interests of society upon which health and happiness depend; and

WHEREAS, We are convinced that those interests are seriously menaced by the utter disregard of the procreative function which characterizes the present system of managing criminals and degenerates; therefore, be it

Resolved, By the Southern Medical Association in regular annual session assembled that we endorse as wise and beneficent the laws of Indiana regulating marriage and providing for the sterilization of habitual criminals and other degenerates.

Resolved, Further, that we commend these laws to the earnest consideration of the component State Medical Societies, with the suggestion that persevering effort be made to incorporate their principles into the laws of each State.

Dr. Cook's paper was further discussed by Dr. Dyer, who moved that the resolutions offered by Dr. Price be referred to the Council for revision before final action is taken by the Association.

Seconded and carried.

Dr. Cooke then closed the discussion.

Dr. William D. Haggard, of Nashville, then presented a paper, entitled "Goiter," which was illustrated by numerous stereopticon slides. (Dr. Haggard's paper appears in full in another part of this Journal.).

The paper was discussed by Dr. Wyman, after which the general meeting adjourned.

THIRD GENERAL MEETING.

The General Meeting was called to order at 11.30 a. m., Thursday, November 10, 1910, by the President.

The Secretary read the minutes of the previous general meetings, which were approved.

The Secretary stated that some false impressions had gone out with reference to his resignation as Secretary-Treasurer. He repeated his resignation, and stated that no one took a deeper interest in the Southern Medical Association than he, and that at all times he stood ready to render any service to the Association in his power, and pledged himself that he would work earnestly during the next year to bring in at least fifty new members.

REPORT OF THE NOMINATING COMMITTEE.

The Nominating Committee made its report, and the following officers were duly elected: President, Dr. Isadore Dyer, New Orleans, La.; Vice-Presidents, Dr. William Litterer, Nashville, Tenn.; Dr. W. P. Adamson, Tampa, Fla.: Dr. W. C. Lyle, Augusta, Ga.; Dr. T. D. Parker, Birmingham, Ala.; Dr. J. B. Guthrie, New Orleans, La.; Dr. A. G. Payne, Greenville, Miss.

The President appointed Drs. Savage and Cooke to escort the newly-elected President to the chair.

Dr. Crawford, in introducing his successor, said: "I assure you, it affords me great pleasure to introduce to you a man who will in every sense of the word measure up to the requirements of the office of President. I know of no man within the range of this Association whom I would rather see fill this chair, that I have so unsuccessfully and incompletely filled, than Dr. Dyer. Gentlemen, I present to you your next President, Dr. Dyer." (Applause.)

DR. DYER'S REMARKS.

Dr. Dyer, in accepting the Presidency, said:

"Mr. President, and Members of the Southern Medical Association.

While weighted with the compliment of my predecessor in office, who so humbly has presented his claims to distinction, I still desire to express my thanks for both the honor which you have conferred upon me and the way in which it was done. I have not deserved the distinction for any previous service to the Association. I have been a member only since last year, and during that time I have been in the rear ranks. I hope by the time of the next meeting I shall have deserved the honor which you have conferred upon me, and in accepting the office of your distinguished retiring President and from you, I want to say that it shall be my endeavor to see that the membership is increased; that the interest of the Association grows, and if we remain as the representative body of the medical men of the South, fulfilling our own purposes and looking out for our own interests, which are so worthy and in need of our attention, we ought within the next two or three years to develop an Association of which we of the Southland should be proud. I thank you." (Applause.)

The President appointed Drs. Haggard and Mitchell to escort the newly-elected Secretary-Treasurer, Dr. Harris, to the platform.

DR. HARRIS' REMARKS.

Dr. Harris said:

"Mr. President, and Members of the Southern Medical Association:

"I can assure you I feel very greatly honored in being made Secretary of this great Association, and I appreciate it more than any honor that has come to me. I do not deserve it, and it has come to me more in point of service than anything else, because I have been connected with the Association from the first meeting, and have known most of the members. I realize that while the position is one of great honor, it carries with it a great deal of work and denial of the pleasures and privileges of the Association. The work done by our former Secretary, Dr. Dowling, has been very arduous. He has worked hard at all times, and I want to say to you, he has spent his own money freely in the interests of this Association, as well as given a great deal of his time to it that might, with more pecuniary profit to him, have been devoted to other things.

"I am glad Dr. Dowling again mentioned the matter of resigning as Secretary-Treasurer and explained his position. Some of the members misunderstood his resignation, but those of us who know him know his loyalty to the Association. Since the Association has convened in Nashville the question of electing Dr. Dowling for its President this year came up. Some of the members took the position that Dr. Dowling by virtue of his long and faithful and arduous services to the Association deserved to be its President, and some of his friends mentioned it to him, and Dr. Dowling told them that there was another gentleman here from Louisiana whom he felt sure would do an immense amount of good for the Association, one of the leading medical men in the United States, a man of international reputation, and he felt it would be to the best interests of the Association to elect his confrere, Dr. Dyer; and he, therefore, absolutely refused to allow his name to be considered at this meeting.

"Again, I want to thank you for the honor you have conferred upon me, and I assure you I shall devote my best efforts to upbuilding this Association." (Applause.)

OFFICERS OF SECTIONS.

The following officers elected by the Sections were announced: Section on Surgery, Chairman, Dr. Duncan Eve, Nashville, Tenn.; Vice-Chairman, Dr. Michael Hoke, Atlanta, Ga.; Secretary, Dr. W. P. McAdory, Birmingham, Ala.

Section on Medicine, Chairman, Dr. William Krauss, Memphis, Tenn.; Vice-Chairman, Dr. C. C. Bass, New Orleans, La.; Secretary, Dr. H. E. Mitchell, Birmingham, Ala.

Section on Ophthalmology, Dr. M. M. Cul-

lom, Nashville, Tenn.; Vice-Chairman, Dr. Richmond McKinney, Memphis, Tenn.; Secretary, Dr. U. S. Bird, Tampa, Fla.

NEXT MEETING AT HATTIESBURG, MISS.

Invitations were presented to hold the next annual meeting at Miami, Fla.; at Jacksonville, Fla.; at Meridian, Miss., and at Hattiesburg, Miss., but Hattiesburg was finally selected as the place for holding the next annual meeting.

FOR A NATIONAL DEPARTMENT OF PUBLIC HEALTH.

Dr. Jere L. Crook, Jackson, Tenn., offered the following resolution, which was adopted:

"In view of the attacks that are being made upon the medical profession by the venal interests, which are engaged in debauching the public, and which have recently emphasized their unholy existence by their advertised opposition to the creation by Congress of a National Department of Health, by their persistent efforts towards the nullification of the Pure Food and Drugs Act and by their advancement of quackery and other public menaces, be it

Resolved, That the Southern Medical Association earnestly urges upon Congress the necessity of creating a National Department of Health for the protection of the present and the future generations, and the strict interpretation of the Pure Food and Drugs Act, whereby the public can be shielded from foods drugged with artificial preservatives, such as benzoate of soda and similar chemicals, which conceal the inferiority of unfit material; from habit-producing nostrums and from dishonest labels, even though in technical conformance with the law."

Dr. A. B. Cooke, of Nashville, offered the following resolutions with reference to the medical inspection of school children, which were unanimously adopted.

FOR INSPECTION OF SCHOOL CHILDREN.

"1. *Resolved,* That the Southern Medical Association heartily indorses the establishment of adequate systems of medical inspection of school children in our Southern States. The people should know that competent medical inspection of school children is a means of safeguarding the public from contagious and infectious diseases; that it is promotive of higher efficiency in pupils and teachers, and that in the long run it brings to pass many economic advantages.

"The medical inspection of children, teachers, and of educational plants and methods in large cities has been proven indispensable in both Europe and America. Medical inspection should accompany compulsory education with its consequent grouping of increasing numbers of children into the schools. As a stimulus to the scientific spirit in education, to the better training of pedagogues, as promising solutions for the problems of the exceptional child, and also as indirect means of educating the masses in matter of health—a thorough-going system of medical inspection, divorced in its operations from partisan politics, is of demonstrated value and is recommended as an important factor in the conservation of national vitality.

"2. *Resolved,* That the Southern Medical Association suggests to the legislatures of our Southern States and to the municipal authorities of our cities and towns the enactment of sufficient laws to secure the benefits of medical inspection in our schools. The Association also invites Boards of Health and Boards of Education, in communities where provisions for such inspections have not been made, to an immediate consideration and study of systems of inspection that have been found effective in certain cities and States.

"3. *Resolved,* That these resolutions be published in the procedings of this convention, and that the press be respectfully requested to give as wide publicity as possible throughout the South to the above resolutions."

Dr. J. B. Guthrie, New Orleans, extended the Association an invitation to attend the meeting of the American Society of Tropical Medicine, which, he said, would meet in New Orleans some time in the spring of 1911.

Dr. William C. Lyle, of Georgia, moved

that a vote of thanks be extended to the medical profession of the City of Nashville, and to the wives and ladies who so cordially assisted in entertaining the members during the meeting; also that our thanks be extended to President Thomas for railroad trip to Hermitage.

Seconded and carried.

The Secretary read the report of the Council, which was submitted at a previous general meeting, and on motion the report, with the recommendations contained therein, was adopted.

Dr. H. H. Martin, Savannah, Ga., Chairman, presented the report of the Council, which was adopted as read. The report is as follows:

REPORT OF THE COUNCIL.

The Council desires to congratulate the Association upon its progress during the past year. We feel that our Association has passed through the stage of doubt, that the need for an organization unifying the progressive medical profession in the South into one strong, active working body has been demonstrated, and that the success of the Association up to this time means that Southern physicians and surgeons will perfofm an important part in the progress of American medicine and surgery, and be accorded their proper places in medical history.

A SUCCESSFUL MEETING.

The Council desires further to congratulate you upon the success of the present meeting, and in behalf of the Southern Medical Association to express to the Nashville medical profession our appreciation for the splendid arrangements that have added so much pleasure to our stay in this city. We feel that the Association should express its gratitude particularly to that prince of gentlemen, Dr. Giles C. Savage, who on account of his intelligent and indefatigable efforts on our behalf, may well be called the Nestor of the Southern Medical Association.

During the interval between the annual sessions, the Council has, as in the past, transacted all of the business of the Association, meeting difficulties as they arose, with ever a watchful eye to its needs and requirements.

THE OFFICIAL JOURNAL.

Early in the history of the Association, the need for an official organ or journal became apparent.

On the 10th day of January, 1910, the President and Chairman of the Council, having been authorized by the Association at its New Orleans meeting to do so, entered into a contract with the Gulf States Journal of Medicine and Surgery to make said Journal the official organ of this body. The essential points of this contract are as follows: The Gulf States Journal of Medicine and Surgery will send a copy monthly to each member of this Association who is in good standing on the first day of January of the then current year. The Gulf States Journal of Medicine and Surgery further agrees to publish all official announcements of the Southern Medical Association; to cause stenographic reports to be made of its proceedings at the annual session; to publish essays or papers read at such meetings, together with the discussions thereon; and to assume an indebtedness of $3000.00, which this Association has incurred. The consideration for this contract is $1.00 for each member of this Association, to be paid to the Journal by the Association.

The Journal has faithfully and conscientiously carried out its part of this contract at a very considerable financial loss, due to the fact that the Editor of the Journal realizing the pernicious influence of proprietary medicine advertisements, after a conference with your Council determined to cut out all advertising matter relating to drugs and medicines of a proprietary nature, which has not been passed upon and approved by the Council of Chemistry and Pharmacy of the American Medical Association. You will readily understand what an enormous financial loss was incurred by this action. For your information, I give you some figures showing the

cost of publishing the Journal, and the amount received by the Journal from this Association.

On January 1, 1910, there were 700 members in good standing in this Association, although they had not all paid their dues. The Journal therefore received, or will receive, from this Association $700 for the year 1910. In return for which the Journal expends the cost of publishing the Journal, which is approximately 10 cents per copy, which for 700 members for twelve months amounts to $840, assumes an indebtedness of $300, which the Association had incurred, and is assuming the cost of the stenographic reports of this meeting, which amounts to $225. You will readily see, therefore, that the Journal has lost in actual expenditure, $665 on their contract for 1910.

The Council now asks for authority to make future contracts with the Journal, with the following recommendations:

First, that our present contract with the Journal be renewed for one year, with the same conditions, at $2.00 per member, instead of $1.00 per member.

Second, that only those members who have paid their dues in full up to the last annual meeting shall receive the Journal.

Third, the Council feels that because of our official Journal's position regarding proprietary medicines, involving a loss to its editors of about $2,500 per annum, that this Association should commend its Journal to the favorable consideration of all truly ethical institutions for medical instruction, to sanitarial and private hospitals, to makers of instruments, apparatus and materials pertaining to the practice of medicine or surgery, and to ethical manufacturing pharmacists, as a reliable medium through which their advertisements may secure the attention of physicians, and be rendered doubly effectual by the conviction of its readers that only the truth is [illegible] that therefore any statement contained therein may be relied upon, and that this Association feels it a duty to acknowledge the altruistic attitude and efforts of the Journal of the Southern Medical Association.

COUNCIL APPROVES MERGER OF JOURNALS.

The Council further congratulates the Journal of this Association upon the merger whereby it unites forces with the Southern Medical Journal of this city, which from its inception, has been one of the cleanest and best edited medical journals in the United States, and of which every doctor in the South is justly proud.

RESIGNATION OF DR. DOWLING.

The Council has to report with profound regret, the resignation of Dr. Oscar Dowling, as Secretary-Theasurer of this Association, which resignation has been made necessary by his increasing duties at home. Dr. Dowling has been a faithful and conscientious worker for this Association for four years. He has given us his time and his money cheerfully and liberally. He has performed his duties for the past year at a very great personal sacrifice, and the Council recommends that he be permitted to retire from the office of Secretary-Treasurer, carrying with him the eternal gratitude of this Association for his devoted service.

Time will not permit a detailed report of all your fiscal affairs, but the Council begs to assure you that they are being administered with economy and discretion. The Association is still greatly in debt, and greatly in need of funds, and the Council urges upon the members the necessity for the prompt payment of all dues.

STERILIZATION OF HABITUAL CRIMINALS.

The Council recommends the adoption of the resolution presented by Dr. Price on last Tuesday evening, amended as follows:

"WHEREAS, The medical profession of the South believes that its highest office is to prevent disease and its most sacred obligation to safeguard these interests of society, upon which health and happiness depend; and

"WHEREAS, We are convinced that these interests are seriously menaced by the utter

disregard of the procreative function which characterizes the present systems of managing criminals and degenerates. Therefore be it

Resolved, By the Southern Medical Association in regular annual session assembled, that we endorse as wise and beneficent the laws of Indiana regulating marriage and providing for the sterilization of habitual criminals and other degenerates.

"Resolved, further that we commend these laws to the earnest consideration of the six State medical societies composing this Association, with the suggestion that persevering effort be made to incorporate their principles into the laws of each State."

There being no further business to come before the general meeting, on motion, the Association adjourned to meet in Hattiesburg, Miss., in 1911.

Food—A New Explanation of Its Uses.

In the *British Medical Journal* for October 8, 1910, quoted by the *New York Medical Journal,* October 29, G. Guelpa makes certain statements which are sufficiently new to command attention. He believes that emaciation "is generally useful" and should be encouraged "because it enables the body rapidly to remove the intoxications which are the cause of the disease." Weakness "is the result of imperfect removal of toxines." "Hunger is not the expression of need of the body for repair of its waste, but it shows us the degree of active intoxication in the digestive system." Proof, "repeated cleansing of the digestive tract causes disappearance of hunger, not increase."

Food "first of all" absorbs and neutralizes the "toxic products which are produced in the alimentary canal. It is only then that it performs its second role, which is to repair the waste of the body."

"There is absolutely no danger in remaining deprived of food for several weeks, provided care be taken to relieve the digestive tract of waste products and poisons which are daily formed there."

Death, after weeks without food, is not caused by starvation, but by the excess of toxins not excreted. According to Dr. Guelpa the best remedy for starvation and its toxins is free purgation, which is also "the best means of increasing the red corpuscles."

In the light of the foregoing one is inclined to envy the hungry poor from a new standpoint. Provided they keep on hand a plentiful supply of mild purgatives the present high price of provisions should have no terrors for them.

The Termination of Pregnancy.

When the date of the last menstruation is unknown, when indeed pregnancy has followed a preceding labor without any evident menstruation intervening, and when at least six months have passed since impregnation, Dr. Ellice McDonald says, in the September number of the *American Journal of the Medical Sciences,* that the height of the uterus above the symphisis pubis, measured in centimeters, and divided by 3.5 will record the age of the pregnancy in lunar months. This number subtracted from the ten lunar months consumed by normal pregnancy will leave the number of the lunar months remaining before labor is due. Suppose the fundus is 28 centimeters above the symphisis, 28 divided by 3½ gives 8. Consequently the patient has passed 8 lunar months of her pregnancy and has two more, or eight weeks, to go, 10 lunar being about equal to nine calendar months.

The measure is taken with the patient on her back, "the tape being allowed to follow the contour of the uterus from the symphisis to the final dip of the fundus." We wonder how the above would work in a case of twins, or of very large versus very small children!

ORIGINAL ARTICLES

SAFEGUARDING SOCIETY FROM THE UNFIT.*

By A. B. COOKE, M.D.,
Nashville, Tenn.

The science of medicine is not concerned with abstractions. Whether heredity or environment is the most potent factor in determining the social value of an individual is of little real moment. The practical consideration concerning which there is no dispute, is that the characteristics and tendencies, mental and physical, of the parent appear with striking uniformity in the offspring. This is conspicuously true of the class known as degenerates. No observing man—more particularly no observing physician—can have failed to note in his own experience many instances in which abnormal traits or vicious tendencies have been faithfully reproduced in one or all the children. The stock-raiser recognizes this principle when he places at the head of his flock or herd only animals possessing the most desirable qualities. However "classy" in appearance a stallion may be, if he is ugly tempered or shows defects in gait or action, his services in the stud are not in demand. The dog-fancier jealously guards his kennel from contamination by impure and alien strains. And even in regard to the humbler forms of life of the vegetable world, attention is constantly directed to the maintenance and improvement of the standard of quality.

Yet with respect to human beings such considerations are totally disregarded. The mentally defective, the morally abandoned, the physically unfit are permitted to display their procreative prowess without let or hindrance, while society patiently and calmly reaps the inevitable harvest. Viewed from the pecuniary side the cost of the degenerate classes as represented by prisons, asylums and kindred institutions, is greater to the nation than the aggregate cost of its army and navy; from the standpoint of suffering and death, the cost doubtless exceeds that of war and pestilence combined.

With the exception of a few progressive States, no attempt is being made to protect the public from this enormous economic loss and practically no concerted effort along humanitarian lines in the interest of the unfortunates themselves. Of course the State must provide for the helpless but, in such provision the welfare of society is not less to be considered than the interests of the individual. The punitive idea which dominates our prison system is an anachronism in our modern civilization. If criminals are such by reason of conditions which they had no voice in shaping and which they are powerless to modify or control, the chief purpose of the State should be to afford them every assistance possible, at the same time that the larger interests of society are being safeguarded. But in spite of the well-intentioned efforts of social reformers and the adoption of more humane methods of management by the majority of States, little tangible result is achieved along the lines indicated. On the contrary, the average inmate of penitentiary or reformatory emerges hardened and embittered against society, and, sad to say, with a larger knowledge of evil than when he entered. Fear of a prison sentence is not an adequate deterrent from crime. The constantly over-crowded condition of our penal institutions is due chiefly to the presence of habitual transgressors. A single conviction is the exception rather than the rule. Many instances can of course be cited of a first offense and terms of service being followed by complete and permanent reformation; but in the light of prison records the chances in a given case are all in favor of a second or even a third conviction. Prisons, then, are not effective as preventives of crime, and, it may be

* Read before the Southern Medical Association at Nashville, November 8, 9, 10, 11, 1910.

observed in passing, capital punishment is little more so. The penalty of murder or rape is death, yet murders and rapes are daily being committed by those who have a full knowledge of the probable consequences.

The calendars of our criminal courts are more congested today than at any time in our country's history and the proportion of recognized criminals to the general population, as shown by the census reports, is constantly on the increase.

The following figures are official.

In 1850 there were in the United States 6,737 prisoners, the ratio to population being 1 in 3,442; in 1860 there were 19,086 prisoners, ratio to population, 1 in 1,047; in 1870 there were 32,901 prisoners, ratio to population 1 in 1,171; in 1880 there were 58,608 prisoners, ratio to population 1 in 855; in 1890 there were 82,329 prisoners, ratio to population 1 in 757; in 1900 there were 133,280 prisoners, ratio to population 1 in 585; in the present census year the ratio will almost certainly figure out 1 in less than 500.*

Glancing for a moment at the official record for Tennessee, which may be taken as at least fairly representing the conditions prevailing in all of the Southern States, we find that during the biennial period 1898-1900, the number of new convicts received was 1,212; for the period 1902-4 there were 1,267; for the period 1906-8 there were 1,327; for the year 1909 there were 810, or, if this rate is maintained for the two-year period 1908-10, the figures will be 1,620.

The records further show that on Dec. 1, 1900, the total number of state convicts on hand was 1,516; on Dec. 1, 1904, there were 1,639; on Dec. 1, 1908, there were 1,775; on Dec. 1, 1909, there were 1,812.

Comparing these figures for the years 1900 and 1909, we find that the number of new convicts increased 34 per cent in the nine years, and that the total number of convicts on hand increased nearly 20 per cent.

It is hardly reasonable to suppose that the general population of Tennessee increased 34 per cent in this nine-year period, and we are therefore forced to conclude that both actually and relatively crime is steadily increasing in the State.

Only one interpretation of these figures is possible, namely, that there is some vital defect, either of omission or of commission, with reference to our system of criminal laws, and it would seem that the time has fully come when any amendment or addition to them which promises to better conditions should be given a fair trial. It is the consensus of opinion of social reformers and criminologists that the only effective way to correct the evil is by restricting propagation among the criminal and degenerate classes. What is known as the "Indiana Movement," is based upon this idea. Two laws have been enacted and are in operation in that enlightened commonwealth, which already foreshadow the solution of the vexed problem.

The first of these passed in 1905, concerns the regulation of marriage:

> "No license to marry shall be issued except upon written and verified application. The form of application shall be supplied by the State Board of Health, and said Board may revise said form from time to time, as may be advisable. No license to marry shall be issued when either of the contracting parties is an imbecile, epileptic, of unsound mind or under guardianship as a person of unsound mind, nor to any male person who is or has been within the last five years, an inmate of any county asylum, or home for indigent persons; nor shall any license issue when either of the contracting parties is afflicted with a transmissible disease."

A marriage in violation of this law is declared to be illegal, and any County Court Clerk who issues a license contrary to law and any person performing the ceremony when

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*"Bulletin 129, Census," by Chas. W. Cartwright, Vol. I—Medical Science Monthly, April 8, 1910.

the applicants have no license are subject to a fine of $100.00.

But recognizing that this law, even though stringently enforced, would necessarily be slow and imperfect in operation, a second law aiming more directly at the evil was enacted in 1907, as follows:

"WHEREAS: Heredity plays a most important part in the transmission of crime, idiocy and imbecility:

Therefore: Be it enacted by the General Assembly of the State of Indiana, that on and after the passage of this act it shall be compulsory for each and every institution in the State entrusted with the care of confirmed criminals, idiots, rapists and imbeciles to appoint upon its staff, in addition to the regular institutional physician, two (2) skilled surgeons of recognized ability whose duty it shall be, in conjunction with the chief physician of the institution, to examine the mental and physical condition of such inmates as are recommended by the institutional physician and Board of Managers:

If, in the judgment of this committee of experts and the board of Managers, procreation is inadvisable and there is no probability of improvement of the mental and physical condition of the inmates, it shall be lawful for the surgeon to perform such operation for the prevention of procreation as shall be decided safest and most effective. But this operation shall not be performed except in cases that have been pronounced unimprovable:

Provided: That in no case shall the consultation fee be more than three ($3.00) dollars to each expert, to be paid out of the funds appropriated for the maintenance of such institution."

The father and champion of this latter law was Dr. H. C. Sharp, of Indianapolis, who was surgeon of the Indiana Reformatory at Jeffersonville, carried out its provisions in 412 cases during the first year after its passage. Previous to that time he had operated in the same institution upon 310 prisoners who voluntarily submitted.

The operation which Dr. Sharp has employed and popularized is that of double vasectomy. It is exceedingly simple in technic, is very quickly done, requires little or no loss of time on the part of the subject, is readily performed under local anaesthesia, and is practically free from danger. It is performed as follows: Under strict aseptic precautions, the vas is grasped between the thumb and forefinger of the left hand at the site selecteed and a few drops of anaesthetic solution injected into the overlying scrotal tissues. A small incision is then made and the vas drawn through, cleared of all other structures, ligated and severed below the ligature. A half inch section of the end next to the testicle is removed, but not ligated, so as not to impede the escape of the testicular secretion. The wound is then closed with a single suture and a suspensory or other form of support applied. There is said to be no shock and the patient resumes his accustomed occupation within a few hours. Performed in this way there is no atrophy or other pathologic change in the testicle, no diminution of sexual power or pleasure, and no impairment of the general health. On the other hand a change is soon noticed in these patients, many of whom are sexual perverts, due to the fact that the secretion is diverted from the seminal vesicles, and their chronic tension and irritability relieved. All observers agree that vicious practices are quickly lessened or abandoned, and the entire nature of the subject, mental, moral and physical, greatly improved. So pronounced is the benefit that the patient himself soon realizes it and is not only grateful, but seeks to induce his fellows to undergo the same treatment.

As regards the female the application of the provisions of the law is a more serious matter. But in this day of perfected surgical

technic ligation or resection of the fallopian tubes is not a formidable procedure and the results which follow are no less satisfactory and desirable.

Vasectomy is not specified as the method of sterilization in the Indiana law, but its advantages over other methods are obvious. Orchidectomy is a mutilating operation and one of considerable gravity, yet I am persuaded that it should be recognized and specified as the only method permissible in a certain class of criminals. I refer to rapists. Human nature will never rise superior to the idea that this type of criminal merits *punishment*, and punishment of a character which will render a repetition of the crime forever impossible. As a preventive, particularly in the South, where this monstrous evil is most prevalent and most abhorrent, it cannot be doubted that the legal infliction of one such penalty would have a more salutary effect than many lynchings or even burnings at the stake.

The possibility of sterilization by the X-rays deserves a word of mention, in this connection. The danger of such a result even in the therapeutic application of the agent is universally recognized and guarded against; but the questions of permanency and dependability remain to be settled. In the case of the male this method may prove to be entirely feasible and, if so, will offer many advantages over surgical measures.

The foregoing remarks have been in the main directed to habitual criminals. But they are just as pertinent and just as applicable to the larger class comprehended under the general term "defectives" or "degenerates." Unrestrained by any sense of responsibility, the hopelessly insane, the congenital idiot, the confirmed inebriate, the imbecile and the sexual pervert embrace every opportunity to gratify their animal instincts without thought of consequences. Left to pursue their own bent, a horde of similar defectives is sure to result. It is a startling thought that the birth rate of this class is increasing, as shown by statistics, fully twice as fast as that of responsible, law-abiding citizens. There is no reason either in justice or mercy why this state of things should be indefinitely tolerated. The law of self-preservation applies to society equally as to the individual, and mere sentimental considerations should have no weight in the face of the issues at stake. The ever-present necessity for new institutions, or additions to old ones, for the care of this class of public charges emphasizes the importance and urgency of the question. Society has the right, and should exercise it, to protect itself from this constantly increasing burden, especially when the means at hand is as safe and humane as it would certainly be effective.

Apropos of the general subject, the following appalling facts, stated in the form of questions, from a recent issue of *The World Today*, are both pertinent and illuminating:

> "Do you know that our criminals cost us $3,500,00 a day?
>
> "Do you know that 250,000 persons—whom the law never touches—are engaged in the systematic pursuit of crime as a business?
>
> "Do you know that the pick-pockets of New York retain the permanent services of one of the best known lawyers in the United States to look after their 'interests'?
>
> "Do you know that during the past ten years the tramp burglars of this country have almost doubled in number?
>
> "Do you know that this army of criminals is partly made up of mental defectives who might have been placed, as children, in institutions where they would have been trained to lead harmless and, perhaps, useful lives?"

Let me add a few questions to this list:

> Do you know that not a single public institution exists in Tennessee or any other Southern state for the care and training of defective children?

Do you know that if sterilization of the unfit had been adequately employed during the past generation no such history of crime and degeneracy as that above set forth would be true today?

Do you know that if this remedy were applied with discriminating thoroughness *now*, the future welfare of society would be more effectively safeguarded than by any other means, and at the same time many an unpromising life rescued and uplifted?

Do you not believe that the appeal of posterity for a purer and cleaner social structure should be heard and heeded?

Do you realize that no more vital subject than this could engage the attention of this body?

That the importance of this great question is coming to be generally recognized is evidenced in the fact that such widely separated states as Kansas, Delaware, Indiana, Connecticut, Michigan and New Jersey have enacted laws regulating marriage, while Utah, Oregon, California, Connecticut and possibly others have followed Indiana's lead in legalizing the sterilization of criminals and degenerates.

It is yet too early to point to definite results from the operation of these laws. But when the crucial test of time shall have been applied, I believe it is reasonable to predict that crime and degeneracy will be largely decreased and the world be correspondingly better and happier.

The Southern Medical Association should lead in all matters looking to the welfare of the Southland, which it loves and serves. If it were not beyond the proper province and purpose of this paper, I should close it by offering a resolution formally endorsing the movement herein discussed, and commending it to the active interest and effort of the several component State societies.

DISCUSSION ON THE PAPER OF DR. COOKE.

Dr. Geo. H. Price, Nashville.

The discussion of this paper is one of very considerable importance. The presentation of such a paper as this before this audience should receive its most serious consideration. The subject under discussion is one that appeals to us and becomes constantly one of more and more moment. It would be impossible at this time to undertake to discuss in detail the features brought out in this admirable paper. It resolves itself into a study and discussion more or less of criminal anthropology. This question has been discussed from time to time since the days of Aristotle and many have been the suggestions. Many have been the methods, many have been the procedures by which and through which it was thought and hoped and earnestly desired to reach a definite, positive, complete and certain solution of this vexed question. In its final analysis the question or subject contains two principal themes or ideas, that is, the restriction, so to speak, of marriage or throwing around this most sacred ordinance such safeguards and barriers as will prohibit and prevent, if possible, the reproduction of such individuals as are a constant menace to society. These are serious questions and must be considered in a serious way. The first suggestion of the paper, namely, that of the regulation of marriages is one towards which sociologists have been looking and working and hoping for years past. But this is a question which involves more than simple suggestion, more than simple legislation. It is a difficult question to reach. It is a difficult question to handle. It is a serious question to undertake to legislate concerning. There is only one possibility perhaps by which this can be done, and that is through the discussion of this most important question by those men upon whom devolves the responsibility, the final struggle with those conditions incident to such marriages as should be interdicted. Sociologists have attempted to solve this problem and have made suggestions as to methods which have been varied. The law, as quoted by Dr. Cooke, as regulating this particular feature in the State of Indiana, is in the main such an one as should meet the hearty approval of all of us. The question of regulating the reproduction of any species of animal life has received the earnest consideration of those most vitally interested in all forms of reproduction and propagation outside of the human family. But when it comes to this broad question it involves the personal rights of individuals, and whenever the personal rights of any individual is touched upon, is limited, is in any wise prescribed, at once that individual with all of his friends and followers engage against such legislation, and I feel satisfied that the members of the profession in every state represented in this assembly this afternoon realize to the fullest what it means when we come to enforce or to pass such laws as may be regarded as regulating certain conditions concerning such individuals and their own personal rights, and it is a difficult matter indeed, as has been suggested by the president this evening, to secure such legislation, because there has been a lack of unity on the part of the medical profession looking towards this great problem of safeguarding the nation. It is true these things have been discussed, especially among the sociologists. It is

true that they have been discussed from the standpoint of the criminologists, pure and simple, but it is for medical bodies as a whole to discuss this question and take some positive stand in regard to what is best to be done, to make suggestions to their clientele, their friends, their representatives throughout the State from which they come, but the possible great advantage to be derived from such legislation, is as yet an unsolved question. When you go back home and talk to those who are in a position to understand and appreciate the great importance of such a movement as this, if it should be launched by the Southern Medical Association, there are many at once who realize the great difficulties which stand in the way of progress along these lines, and who say that such things are impossible. But gentlemen, the medical profession has been confronted by so many impossibilities that have been eventually overcome and are now demonstrated to be possibilities, that to oppose any movement inaugurated by this body and promulgated by the various members of this Association, which has for its object the high ideals contained in the essay of the evening, is to say that the medical profession will stand still and wait for some one else to push this movement to the front and to make it felt and known and realized in every State in the Union.

Dr. Oscar Dowling, New Orleans.

I have listened to Dr. Cooke's paper with a great deal of interest, and I wish to say in this connection that the medical departments of Tulane University are alive to the importance of this movement, and we have been a little surprised to get communications from different sections of the state along the lines which Dr. Cooke has just read, and I am sure that a great many of the people in the State of Louisiana would be very much interested in this movement. Some of them have suggested the ideas conveyed in Dr. Cooke's paper, and in addition to that some have suggested that all communicable diseases, especially gonorrhea and syphilis, should be among the reported diseases, and that these cases should be reported to boards of health just as cases of diphtheria and scarlet fever are today. You know what the results of such a movement as this means, and I have wished principally to call your attention to the fact that some of the people in the State of Louisiana are already agitating this movement.

Dr. John H. White, New Orleans.

I would not inveigh against the idea which has been put forward by Dr. Cooke in this paper this evening. On the contrary, at the Atlantic City meeting of the American Medical Association, I requested Dr. Sharp to read a paper before my section on this subject, knowing what Dr. Sharp had done, and knowing what can be accomplished by it, but there is one difficulty growing out of that particular remedy for this class of defectives in preventing the reproduction of the species. It would be undoubtedly utilized (I refer now to the operation of vasectomy) by the rake, as fitting him to practice his nefarious life without the risk of being caught up with, and I believe this thing would be carefully considered before resorting generally to this operation and the law providing for the operation should safeguard men voluntarily submitting to it for that very reason.

Dr. John H. White, New Orleans.

(Later.) I want to make myself clear in reference to this matter. I had it from Dr. Sharp himself and others who are much interested in this subject, that not only is the capacity for such sexual intercourse not decreased, but rather increased than otherwise by the operation of vasectomy. I do not think anybody will dispute that many a man is deterred from committing seduction or rape for fear of the consequences. If a man could voluntarily, who cares only for sexual intercourse as such, undergo operation and rid himself of the consequences of his evil practices, I can readily see how it might be some encouragement to him. If the Indiana law is put into execution in these states vasectomy will not be the operation performed on that class of men, and so I guess I can leave it to them.

Dr. Jere L. Crook, Jackson, Tenn.

About four years ago Japan passed a very rigid sterilization law, and there are those who are of the opinion that the reason Japan was so successful in her recent conflict was because this law was the means of producing a set of men physically able to withstand the terrible strain of that awful conflict. Some three years ago I read a paper along this line, and at that time Dr. G. H. Lydston's book was in the press, and he was kind enough to send me some advance sheets of the book. In this book Dr. Lydston took an advanced position along the line of right marriage laws, and the suggestions contained in Dr. Cooke's paper follow closely those in this book, and they seemed at that time to be greatly in advance of the times. But it does seem to me that it is time for the medical profession to take active steps toward bringing about a consummation of this idea. As has been well said, when we invade the sacred office of matrimony and legislate regarding it, we step upon the toes of men and women. People say you are taking away from us our individual liberty, and great opposition arises immediately. This movement must be undertaken with great care, looking to the rights and feelings of others. There is no reason why we should not advocate some degree of restriction in regard to marriage laws. Every candidate for matrimony should know that he is in a proper physical condition for engaging in matrimony. The women should be examined as well as the men. There should be in every county a woman physician to conduct these examinations. This examination should not be such as to lead people to think that advantage is being taken of them, or to raise objection to it. There is no reason why an examination should not be made similar to that which is practiced for life insurance. I have suggested several times to men I have known intimately that it would be a good plan, before they allow their daughters to marry men, to require the prospective candidates for matrimony, to show a recent policy for life insurance. If such men pass such a life insurance examination, they are pretty good subjects for matrimony. There should be no objection to an examination of this sort before the candidate

is allowed to marry, and it is time we took active steps towards going ahead with this movement.

Dr Isadore Dyer, of New Orleans.

I rise to move that these resolutions be referred to the Council so that they may be properly worded before final presentation and action by this Association. The laity is ready for the initiative of the medical profession in regard to this movement. In almost every article which has appeared the last few years regarding the general subject of eugenics, this particular question has been discussed as one of supreme moment, and the general subject of eugenics refers to the preservation of the human species along all lines relating to the better care of the children, to the better care of adults in our asylums and institutions, and I believe that the professors of eugenics, the criminologists and scientists, who are interested in the solution of this question are all satisfied that the aphorism of Oliver Wendell Holmes, that a man should begin taking care of himself by taking care of his great grandfather is very pertinent, and we ourselves, for the sake of our own people should try to establish or have enacted a law protecting our sisters and our descendants from the possibilities to which they have been exposed, at least in regard to criminals. I would suggest, therefore, as an amendment, that the resolutions be referred to the council in order that they may change the wording before final action is taken by this body. This Association is not made up of component societies, but made up of its individual members, and if the mover will accept that as an amendment, I shall be glad to second the resolutions.

Dr. Price accepted the amendment, and the resolutions were then referred to the council.

Dr. Cooke, closing the discussion.

I do not think there is anything more I have to say in addition to what I have already said in my paper. There are one or two remarks that might be made. For instance, Dr. White's objection to the law, or to the promulgation of the movement, is that it may license the roue to proscribe his diseases. It strikes me that kind of individual is one who is not concerned about his practices. I do not think it would either give him greater liberty or in any way curtail his present mode of living. The law would naturally protect society at large or the community in which this character of individual lives from the continuation of his vice. He is not going to be reformed otherwise, and would not be comprehended in the meaning of the laws I have called attention to.

The question of personal liberty has been referred to in this discussion. From my point of view, what is the matter with this country? There is too much personal liberty in this country, not only on this, but on a great many other questions, and the personal liberty of an individual means very little when compared to and contrasted with the welfare of society at large. The old idea of the greatest good to the greatest number is the one that has actuated us in the consideration of this or any kindred subject.

EXOPHTHALMIC GOITRE.*

By WILLIAM D. HAGGARD, M.D.,
Professor of Clinical and Abdominal Surgery in the University of Nashville and Tennessee.

The impetus which has been given to the study of this disease in the last decade has been phenomenal. The literature is rich in contributions from the physiological, pathological, experimental and clinical sides. The appreciation of the remarkable co-relation of the internal secretions of which the thyroid is one of the most important elements has stimulated a wealth of original investigations. The physiology of the gland in this connection has assumed a different valence. Alterations in its function produces the most intricate variations of health, not only in regard to its own function but in some imponderable way upon the associated functions of the other ductless glands, notably the adrenals and the chromaffin system.' The pathology of exophthalmic goitre has been extensively investigated by Wilson, McCallum, MacCarty and others. The increasing frequency of surgical removal of the diseased gland has offered an exceptional opportunity to study its morbid changes and to definitely associate them with the varying clinical phases of this fascinatingly complex disease.

The advent of the antithyroid and allied sera of Moebius, of Rogers and Beebee has put another speculative, as well as practical value upon the investigations. We have progressed more in the last five years in the mastery of the minutiae of this intricate problem than we had done in many preceeding decades. As Wilson naively remarks, "So much of our trouble has been due to knowing so

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much that wasn't so." During this short recent period of intensified interest and unwonted progress, the tendency has been towards the elimination of erroneous conceptions about the origin of the disease; simplification of its natural and pathologic history and the perfection of at least one of the methods of cure—the surgical. We have recognized that the essential irritating cause of the overfunctioning of the thyroid has probably to do with the elementary embryology and physiology of the ductless glands about which we know so little.

To begin with, the term exophthalmic goitre is more or less misleading, because both the exophthalmos and the goitre may be absent and the disease be very severe, albeit insidious. Indeed the exophthalmos is said to be absent in one-fifth of the cases.

Parry, in England, first described the disease in 1825; Graves, in Ireland, in 1835; Basedow, in Germany, in 1840, and it has been called by the names of these worthies. The name exophthalmic goitre replaced them more or less on account of these two prominent symptoms. Kocher proposes the term thyrotoxicosis, which is quite accurate. Mayo with his usual incisive directness goes to the very essential of the disease and very correctly denominates it hyperthyroidism. This is sufficiently comprehensive and accurate. The mere acceptance of this term should have a tendency to an earlier appreciation of the significance of the disease and should put it in the class of serious and correctly labelled affections and thus prevent its masquerading as a nondescript heart trouble or obscure nervous affection, the prognosis of which may not be considered grave. It we wait for the exophthalmos to tell the tale we will often overlook or misinterpret the tachycardia and nervous symptoms at a time when it could intelligently be treated in a curable stage. The disease is widely but not extensively distributed over this country and is said to occur more frequently in sections where the medical men are careful observers. In fact "if we look with a seeing eye" it is surprising how many of these cases will challenge our attention.

While the actual cause of the disease has not been unravelled, it is well recognized to be of a nutritional nature and our complex civilization with its strenuosity has much to do with its causation. Prolonged mental and physical strain, intense excitement, over-study, anxiety, worry, insufficient sleep and grief most frequently predisposed to it. A severe shock has been known to bring it suddenly out of a clear sky and also to produce serious and at times fatal excerbations of the already existing disease. Infections, such as typhoid, malaria and especially tonsilitis often convert an unobtrusive goitre into a very active gland with sudden and marked symptoms of hyperthyroidism. I witnessed a striking example of this type of the disease some years ago in a healthy young lady, who two weeks after a tonsilar infection, followed by a middle ear complication, suddenly developed an extreme illness marked by severe abdominal pain, with high temperature, very rapid pulse and great restlessness. So acute were the abdominal symptoms and so serious the condition of the patient that laparotomy had been proposed for a peritonitis of undetermined origin. The pulse was 180. The restlessness and jactitation was so unusual and the plight of the patient so out of proportion to the local condition that I declined to operate, because on going over the patient I discovered a small goitre which had given no previous trouble, but in the light of the condition just narrated, it was construed as a case of acute hyperthyroidism. She progressively and rapidly went on to a fatal termination within ten days.

It is estimated to be from 16 to 46 times as frequent in women as in men. Women are more subjected to these emotional variations, as well as to the metabolic changes incident to menstruation, gestation, parturition and lactation.

Enlargement of the thyroid gland is sup-

posed to be due to some biochemical inefficiency of the epithelium to take up and handle the iodine in our food and drink. Thus the frequency of goitre in Switzerland is explained by the content of iodine in its waters. (About a year ago I removed a goitre from a Swiss woman, who had resided in this country from childhood, but in whom the goitre appeared a few months after a temporary sojourn in Switzerland.) It is said that over two thousand applicants for the Swiss army are annually disqualified because of goitre. The advent of pure drinking water in a Swiss Canton decreased goitre in the school children from 59 per cent to 2-1 per cent. (McCarrison thinks goitre is due to a micro-organism in the suspended matter of drinking water as an intestinal parasite. Goitres were produced in Kashmir, in four out of thirteen individuals after two weeks of administration of the filtrate of the water. When it was sterilized and administered to eight others no goitre developed.)

MacCarty believes exophthalmic goitre to be due to a process of reversion to some former function of the thyroid.

The change in the quality and quantity of the thyroid secretion is responsible for the toxic manifestations, which we recognize as symptoms of hyperthyroidism (and are due most probably to the neucleo-proteids and the thyroglobin manufactured by the gland which is delivered with its poisonous characteristics into the circulation by way of the lymphatics).

We know that symptoms of hyperthyroidism can be produced not only by iodine, but very frequently by feeding thyroid substance. In deed, we are warned that the danger of administering thyroid extract in Graves' disease is a too common error. Tachycardia and even exophthalmos have been caused by the taking of the advertised Anti-fat remedies, as an aid to reduce obesity, which are well known to be largely composed of thyroid extract.

It occurs most frequently between the ages of 20 and 40. Children have been born with goitre and Mayo has operated upon a child of seven years for hyperthyroidism, which was developed at the age of five.

The gland physiologically hypertrophies about the time of puberty, especially in girls. It, however, usually disappears spontaneously in a few months or years and is often cured by iodine, sera, etc., or undergoes resolution with or without treatment. The gland also normally hypertrophies during gestation. It evidently has much to do with nitrogenous metabolism. If it does not enlarge normally by the seventh month eclampsia is to be feared. When exophthalmic goitre exists it becomes a serious complication of pregnacy. If the gland is so diseased that the normal quality of the secretion is interfered with then toxemia and albuminuria are prone to occur.

Symptoms. The four cardinal symptoms of tachycardia, goitre, tremor and exophthalmos are unmistakable. It should be our purpose, however, to recognize it, if possible, at an earlier period of its development to the end that its lethal tendencies can be anticipated and corrected by appropriate treatment. The early symptoms frequently amount only to a sense of becoming fatigued easily. Palpitation, the rapid thumping of the heart on exertion, from indigestion and at the menstrual period and later without apparent cause are oftentimes suggestive. The tachycardia may be intermittent or constant and often disappears spontaneously, or under treatment. Associated with marked muscular weakness and exhaustion are the vasomotor nervous symptoms from the excess of thyroid activity. Fine tremors of the extended fingers and extremities and of the tongue and lips and of the eyes and pupils may be one of the first sypmtoms leading to consultation. Later when these tremors become marked they may be recognized and almost diagnosed at a distance. When the tremor is aggravated it simulates closely that of chronic alcoholism. There is often mental disquietude and restlessness, with insomnia. The skin is flushed, sweating occurs, especially in the palms of the

hands and in the axillae. Later pigmentation from chronic toxemia appears, especially about the nipples and orifices of the body and in the chronic cases almost resembles Addisons' disease.

An acute toxic case presents high temperature, extreme restlessness, tumultuous heart action, sometimes up to 200, and nausea and vomiting which may become frequent and distressing. There may be epigastric and abdominal pain. It looks and is like a violent septic intoxication. Active delirium followed by stupor precedes death. The acutely fatal toxic cases that I have observed, four in number, all had temperatures up to 106, shortly before the end.

In the chronic cases with exophthalmos the eye symptoms are important.

Stellwag describes the widening of the lid slits which gives the appearance of protrusion. VonGraefe's sign is the dissociation of the movement of the eye balls and lids which causes the upper lid to lag in looking down. Koecher called attention to the lagging of the lower lid in looking up. Moebius' phenomena is the breaking of the convergence of the eye giving diplopia for the near vision. Landstrom called attention to the sudden recession of the lids when looking at the fingers held near the eyes. The resultant of these irregularities gives a staring, shiny eye with an expression of great unrest.

Exophthalmos is due to a contraction of a cuff of muscle, according to Landstrom and others, that is attached to the orbital septum in front, and to the equator of the eye ball behind. It contracts tonically and pulls the eye ball forward much as a window frame could be pulled forward. It is not due, as has been supposed, to fat behind the eyes. In some instances the balls have been dislocated from their sockets and have to be pushed back and in others corneal ulcers have formed and blindness results from the inability of the lids to close. Exophthalmos is seen sometimes in chronic nephritis and is merely an evidence of chronic systemic toxemia acting on the autonomic cervical chain which controls the eye ball.

Tachycardia is one of the most dependable symptoms. A quick, irritable high tension pulse is compelling. The rate varies greatly. It is accelerated upon mental excitation, exertion, etc. The heart beat is very forcible. The pulse can be counted in the capillaries and the pulsations seen through the garments.

So important is this symptom that Ochsner says: "In the presence of tachycardia, with even the slightest degree of exophthalmos or enlargement of the thyroid, a positive diagnosis of exophthalmic goitre can always be made."

The thyroid gland may not appear to be larger than normal but often reaches an average circumference of from 13 to 20 inches about the neck.

The pathological changes in the gland may so alter its secreting power in nature's effort at control of the over-activity that the condition of hypo-thyroidism or myxoedema often supervenes. The patient then has the harsh, dry, thick skin with open pores, loss of hair, cracking nails and dread of cold. There are deposits of fat over the shoulder, the facial expression is changed and broadened. Mental dullness is characteristic and is due to the starving for thyroid fluid. The unbridled activity of the adrenal secretion then, as it were, ties a string around all of the capillaries and thus expends its action upon the integement and cortex of the brain.

The heart muscle degenerates in chronic hyperthyroidism with dilatation and its attendant ills ensue. Chronic toxic nephritis gives the oedema, dropsy, etc. Changes in the nervous system produce recurrent attacks of diarrhoea. The patient is exhausted by chronic invalidism and at this stage proceeds unchecked to dissolution. Vague mental disturbances from altered nutrition of the nervous system appear and when fatty degen-

eration of the liver occurs the patients rarely recover.

Kocher describes marked dimunition in the neutrophile and eosinophile leucocytes with an increase in lymphocytes and slow coagulability as being a typical blood picture.

It is apparent from the extensive and complex changes which this disease entails that methods of treatment which are not directed to the control of the cause are very disappointing. The death rate in the unmolested disease is said to be 13 per cent. The multiplication of remedies which have been fruitlessly directed against this inevitable loss has been appalling. Aside from the symptomatic and radical treatment it may be said that the most promising forms of medication at the present time are—(1.) The neutral hydrobromatine of quinine suggested by Forscheimer, and used by Mead and Jackson at Boston, with 69% and 75% of cures, respectively, in two groups of cases. (2.) The anti-thyroid serum of Rogers and Beebee. They report 480 cases and 15% were cured of all traces of the disease, 10% were cured of all subjective symptoms, but still retain signs of goitre; 50% were improved to a greater or less extent when last heard from; 17% showed no improvement and 8% died.

The X-rays have been tried for this as for about all other diseases. Kocher thinks they have slight effect and are sometimes contraindicated on account of their influence on the skin. Mumford in his new work on surgery expresses the belief after careful study of the X-ray in hyperthyroidism that they have little or no benefit, except occasionally in lessening the symptoms and in preparing for operation. In this latter function Mayo employes it and says improvement may be marked for a time but is seldom lasting. It is supposed to have a tendency to constrict the efferent lymphatics and leatherize the tissues and produce a sort of capsule about the gland. Leonard, one of the most expert Roentgenologists, admonishes us not to carry it too far and Taylor who had used it for six months in a simple goitre, says it gave rise to symptoms of hyperthyroidism and exophthalmos which subsided upon the discontinuance of the X-ray. It can aggravate the symptoms very alarmingly and in one case, which I observed, fatally, although in another case for which I had it employed a complete cure was obtained, which has been permanent for about five years.

Albert Kocher in his thesis, tersely observes as a result of his unparalelled experience that "to say that surgical treatment is the best is not enough. It has proven itself superior to any other form of treatment. It attacks the organ which is instrumental in producing the toxicosis." It can be shown statistically to offer the best results and at the present time early operation is the best treatment. It is comforting to realize that the disease can be very generally cured if taken in time. Ochsner says: "When improvement in the cases from hygienic, dietetic and medical treatment together with rest is only of temporary duration, then operation is strongly indicated."

The very acute or advanced cases, however, are very grave surgical cases. Any operation upon a patient suffering from this disease is notoriously dangerous, as shown by Hirst's statistics. Especially, when it is upon the gland itself at an inopportune time. The present surgical efforts are directed to decrease the blood supply by ligation of the arteries and thus reduce the amount of secretion or to lessen the amount of secretion surface by partial thyroidectomy. Mayo estimates that one-fourth of the cases come for relief in a condition precluding anything but ligation; whereas, two-thirds can have the larger lobe and isthmus removed without the ligation of the opposite superior thyroid artery. Ligation of the superior thyroid arteries and veins as proposed by Wolffler, in 1880, with sometimes a small portion of the gland is indicated in two classes of cases.

(1.) The cases presenting very mild symptoms, in which the cutting off of the blood

supply will stop the enormous multiplication of cells upon which hyperthyroidism depends, and thus cause the gland to revert to the simple type (non-proliferating acini) resulting in cure.

(2.) The badly advanced cases in which thyroidectomy is extremely hazardous, from the operation per se and from the terminal changes of the toxemia—fatty degeneration of the liver, brown atrophy of the heart muscle, dilatation, etc. These cases are really lethal and if operated on radically are utterly unable to stand the slight additional burden. They have nothing but death coming to them, and should be avoided as surgical risks. Many of them can, however, by rest in bed, ice-bag to the precordia, belladonna, diuretics and heart tonics, together with the X-ray, be so improved that they can easily undergo ligation of one and subsequently another superior thyroid. It is surprising the wonderful amount of improvement that will accrue from this simple procedure. It will not be as spontaneous and rapid as if they were able to have the major portion of the gland itself removed, thus stopping, at once, the elaboration of the toxin. Commonly, these patients will gain from 12 to 30 lbs. in four months, and with the partial amelioration of symptoms —of all immediately threatening symptoms— the radical removal of from one-half to three-fifths of the gland can be secondarily accomplished with ease and safety.

In Kochers' London address last July he reports 4,394 cases of goitre, including 469 cases of Graves disease, hyperthyroidism.

In the latter group the mortality was 34%. In mortality of plain goitre it was ½ of 1%.

Mayo who has operated on many cases of hyperthyroidism than any other surgeon, says:

The ligation is then a temporary remedy, but is extremely effective in this class of cases. It literally transfers them from the hopeless, radically, inoperable class, to a condition of so marked an improvement that the complete operation may be undertaken. In thus extending, by this graduated operation, hope to a more severe and otherwise fatal class of cases, the mortality, as might be expected, is correspondingly higher than in a class accounted good surgical risks.

The tentative operation of ligation is all that the neglected cases can bear. It makes a distinct appeal for earlier recognition of hyperthyroidism to the end that the radical curative operation may be done, while it is yet simple of accomplishment and certain of relief.

Ligation is especially recommended by Mayo in cases hardly severe enough to require thyroidectomy. He says: "It will often produce a cure in a few weeks with but little risk and without the necessity of special medication." Such cases can easily bear a general anaesthetic and have transverse incision direct to both vessels, as so beautifully performed and pictured by Mayo. In the acute cases, however, it is unnecessary to subject them to so formal an operation. In such cases I have followed the plan of Crile and ligated the one superior thyroid artery without removing the patient from her bed and without her knowledge of any operation being done. Scopolamin and morphine bring the patient to a semi-somnolent condition and under cocaine anæsthesia a small incision can be made over the superior pole of the side to be ligated. In many cases the superior thyroid artery can be detected by its peculiar thrill. These cases moreover are especially adapted to ligation. A curved needle threaded with linen is swept around the tissues at the upper pole. The cartiod can be located and held out of the way with the other finger. One or two ligatures, when tied absolutely stop the thrill and a stitch in the skin completes a very simple operation.

If I had adopted this method in one of my earlier desperate cases, where I made a formidable operation of ligating the superior thyroid, I would have prevented the fright and physic stimuli which acted as an accelerator

to the thyroid secretion and caused death from acute thyroid fever in twenty-four hours.

The cases in which I have performed ligation, while few in number, have been very satisfactory in the relief of the symptoms. In two cases it was employed simply as a preliminary step in the graduated operation, but one of the patients is so much improved at the end of four months that the removal of one lobe of the gland is apparently not required at this time. If, at least in one case ligation had been subsituted for thyroidectomy a death from post-operative hyperthyroidism might have been averted.

In cases of ligation, without thyroidectomy, Mayo's results were as follows:

Slight improvement	0 cases
Great improvement	4 cases
Very marked improvement	11 cases
Absolutely well	4 cases
Cases of questionable exopthalmic goitre, no improvement	9 cases

Thyroidectomy. Ether anaesthesia by the open method, if skillfully given, is the best all round anaesthetic. Gas and oxygen anaesthesia preceded by scopolamin and morphia, when given by an expert, is the safest and in many respects the most desirable anaesthetic. The operation has and can be done under cocaine (Koecher), but physic influences of fear and the patient's knowledge of the procedure would outweight the slight dangers of a properly administered anaesthetic. The average surgeon too can do his work with greater ease and celerity. Aside from the anatomical and technical steps in the operation the avoidance of fright, as suggested by Crile, is an important factor. The operation can be planned in the bad cases by applying a surgical dressing to the neck for several days preceding operation; having the patient taken to the anaesthetizing room daily and some mock anaesthetic administered as an ostensible method of treatment and thus abolish fear that the day of operation will not be known to the patient. By simply continuing the daily mock treatment complete anaesthesia is induced and the operation performed as usual. While this may not be absolutely necessary in all cases there can certainly be no objection to it and its beneficience is positive.

DISCUSSION ON THE PAPER OF DR. HAGGARD.

Dr. B. L. Wyman, Birmingham, Ala.

I simply rise to express the thanks of the Association to Dr. Haggard for this able and exhaustive discussion of the subject of goiter or hyperthyroidism. It is a well known fact, as the essayist has stated, that the medical treatment of hyperthyroidism has been practically a failure in the majority of cases, and that agrees with my experience in the treatment of this disease, so that in recent years I have referred my cases to a surgeon, and I desire to emphasize what the author of the paper has said with reference to the importance of early diagnosis. I have now under my care a patient who was referred to Dr. Mayo sometime ago, where operation had been long delayed. I advised operation in this case some years ago. The woman deferred it until I felt sure that thyroidectomy was impossible, and even the operation, which was finally performed by Dr. Mayo, of ligation of the superior thyroid, has not resulted favorably. The woman had a dilated heart when she went to Rochester, and hence the operation was not followed by results, so that if we hope to accomplish anything in the treatment of hyperthyroidism, early diagnosis and prompt operation are absolutely essential.

SOME THERAPEUTIC INDICATIONS FOR THYROID ADMINISTRATION.

By JAMES McCAW TOMPKINS, M.D.,
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So complex is the intimate relationship of thyroid secretion to the normal performance of bodily functions that physiologists have not as yet been able to explain the exact processes or changes which take place in the organs and tissues.

We do know, however, that there are two active principles secreted by the gland (1) Thyro-nucleoproteid, which, acting through the sympathetic system, increases heart beat and relaxes vessel walls, and (2) Thyroglobulin, which acts universally on cellular metabolism.

Under the term metabolism may be summed

up all the changes which take place in animal cells, and these changes are mainly cell destruction and cell construction. The destructive metabolism of a cell does go on during its quiescence, but is tremendously increased by the activity of the cell. Thyro-globulin is a chemical stimulus to cellular protoplasm, therefore if in excess, there will be an abnormal tissue destruction, and if diminished, an abnormal tissue production.

There is one tissue which proves an exception to this general rule; bone growth is promoted by increased thyroid and disastrously retarded by its absence.

We also know that a very close connection exists between the thyroid and the chromaffin cells which are the source of adrenalin, and that the functional activity of the liver, pancreas and ovaries is markedly affected by the amount of thyroid secretion present in the circulation. At certain periods of life there is a decided tendency for the gland to assume a physiological over or under-activity; thus at puberty, at the menstrual epochs and during pregnacy, the thyroid frequently becomes congested and sends out an increased amount of secretion; in old age there is usually a decreased amount of secretion. In either case the pendulum may swing too far, and these ordinarily physiological phenomena may assume such proportions as to require appropriate treatment to control them. On the other hand unless the demand for increased thyroid in pregnacy is met by a physiological response on the part of the gland, there are likely to arise serious metabolic disturbances which may even terminate in death.

The thyroid likewise plays an important part in overcoming certain of the acute infections ,and here, where the thyroid is compelled to respond to repeated demands for a high degree of activity, it may assume a chronically over-active condition resulting in exophthalmic goitre. Many causes operate in producing loss of thyroid function; acute inflammations, various chronic atrophies and unknown factors play their part. The therapeutic removal of too large a portion of the gland and its capsule may call for compulsatory thyroid administration in after years, and it must be remembered that there is a tendency for the portion of the gland left behind after an operation to undergo a certain amount of atrophy.

The effect of loss of thyroid upon the individual will vary according to the age of the patient, the amount of its diminution, and the suddenness with which this diminution has taken place. The earlier it occurs the more the condition which in results resembles cretinism, the later, myxedema. We may conclude, therefore, that thyroid is rationally indicated (1.) In those cases where the general development shows that there is clearly a congential or acquired lack of thyroid secretion; these fall under two broad heads, cretinism and myxedema. In cretinism we may hope for considerable improvement but not for a complete cure, the main point being to secure an efficient preparation and to use it in sufficient dosage for a long enough period of time. Endemic and sporadic cases offer a better prognosis than the congenital type.

Cases showing a lack of thyroid secretion after the arbitrarily adopted standard of fifteen years are commonly classed as cases of myxedema. They may be spontaneous or post-operative; post-operative cases often develop promptly after the removal of too large a portion of the gland. The spontaneous variety develop very slowly, months or years may elapse before the case has become typical. The case with mental inertia, dull headaches, atrophic changes in the skin, hair, nails or teeth, subnormal body temperature, a tendency to hemorrhage, cyanosis, and solid edema around face, neck or eyelids, will not be overlooked; they are rare however, and it is the early and the incomplete stages of the condition that are common, and which demand our attention. Most of these cases are overlooked, and in fact, unless the disease is

borne constantly in mind, they must often be mistaken for other affections; thus, when the thyroid happens to be enlarged, the patient is thought to have exophthalmic goitre, and recourse is had to surgical or other means directed towards diminishing or removing the gland, which renders the case worse. This is comparable to the often seen error of administering thyroid, or of the use of iodine where there is already an excess of secretion. There should be no trouble in differentiating goitre with excess of secretion from goitre with a lack of secretion, provided that careful attention has been paid to the clinical picture. Myxedematous symptoms frequently do exist with an enlargement of the gland, they also follow upon old cases of exophthalmic goitre, and may even be associated with the symptoms of oversecretion. Other common mistakes of diagnosis are to confuse it with a simple obesity, neurasthenia or nephritis. At times the therapeutic test may be of great value in establishing a correct diagnosis.

The first notable symptoms of myxedematous undersecretion are almost always mental or in the skin. The skin is found to be dry with some loss or coarsening of the hair, and the natural secretion of sweat is not produced by either physical exercise or excessively hot weather; there is an unusual sensitiveness to cold.

The positive control exercised by the thyroid over the nutrition of the skin is nowhere better shown than by its clinical value in certain chronic skin affections: Psoriasis, chronic eczema of the dry scaly type, ichthyosis, sclera neonatorum, scheroderma, anhidrosis, multiple fibromata cutis, and in multiple senile keratoses where its employment will cause a rapid clearing up of the keratotic plaques.

The benefit of thyroid in these skin disorders has been amply demonstrated, and its use in this very obstinate and discouraging class of cases should be extended.

(3.) Thyroid by causing increased destructive metabolism is useful in general or localized accumulations of fat, simple obesity, adiposis dolorosa and multiple lipomatosis.

(4.) The fourth class of cases in which thyroid is valuable, are the cases of internal hemorrhage. It is useful here on account of its properties of lowering blood pressure and of shortening the coagulation time of the blood; two points which have been demonstrated at various times and places and which were recently confirmed by a serious of personal experiments on the human subject. This series is not completely extensive, having been interrupted by unavoidable circumstances, but the blood pressure and coagulation time was taken on ten healthy adults beforehand, and at intervals of several days after the administration of thyroid the dosage was pushed to the limit of tolerance. The experiments pointed conclusively to the fact that thyroid immoderate dosage does markedly increase blood coagulation and does lower blood pressure. In non-surgical menorrhagia, in hemorrhage from the kidney, from tpyhoid and other intestinal ulcerations, as a prophylactic measure where the gall bladder is to be drained after a jaundice, in pupura hemorrhagica, in hemorrhages from the lung and in the esential anemias where hemorrhage is a prominent symptom, it will be found that thyroid is superior to the other remedies in vogue.

(5.) In some of the acute infections, especially acute follicular tonsilitis, it is well known that there is a need for increased thyroid secretion, and if supplied artificially, the disease is combatted and the danger of a resulting hyperthyroidism eliminated. In acute rheumatic infection and the allied conditions, such as acute rheumatic sciatica, the result of its employment may be very striking; chronic arthritic conditions are also sometimes benefitted. J. R. Clemson (1.) has noticed so frequently an enlargement of the thyroid in cases of rheumatism in children, that he claims

for it a place as a diagnostic sign in this condition. He has found it persisting with a chronic endocarditis after all the other signs of rheumatism had disappeared.

(6.) The favorable effect of thyroid on bone nutrition renders it of assistance in promoting bony union in fractures, and in achondroplasia.

(7.) Certain mental states, especially those psychoses which accompany a natural or a prematurely induced menopause, can sometimes be greatly alleviated by thyroid, because thyroid compensates to a certain extent for a lack of ovarian secretion.

(8.) Probably the most imperative call for thyroid is isued when pregnacy has thrown its great burden upon physiological metabolism. The constructive metabolism going on so rapidly within the uterus must be compensated for by an increased destructive metabolism throughout the tissues of the mother. Nature usually accomplishes this by pouring out an increased secretion from the thyroid, but in some cases where physiological response has not been equal to physiological demand, there will occur metabolic disorders which result in the various toxemias of pregnacy. In many of these toxemias, therefore, it is not surprising that thyroid administration constitutes one of our most important therapeutic agents. Especially is this true of the convulsive toxemias. I have known of cases of eclampsia where thyroid injections were successful after all other means, including the emptying of the uterus, seemed to have been doomed to failure. It is very valuable where for some very strong reason a case has to be carried along for some weeks, nothwithstanding the fact that such grave warnings are present as albumen, advanced blood pressure, headaches or edema. Similarly thyroid has been successfully used in the convulsions of ordinary nephritis.

This great usefulness of thyroid in so many conditions has now been so widely demonstrated that there has been created a demand for a standardized product. There is apparently a very considerable difference in the activity of present day products. S. P. Beebe, (2), after a series of exhaustive experiments, has arrived at the conclusion that human thyroid extract administered hypodermically is the best for the human subject. He uses with great clinical success a proteid precipitated from the extract of human thyroid gland, and standardized on the iodine basis, which is probably the most satisfactory basis for determining the proteid standard. The ordinary products, however, if pushed for effect, will serve well for the chronic cases. In the desperate cases of metabolic toxemia thyroid should be given hypodermically; here very large dosage may be necessary.

In chronic cases one-fourth to one-half of a fresh gland of a sheep is excellent where it can be obtained daily.

Finally let us remember that the thyroid may be gently stimulated by the administration of iodine; the gland possesses the power of absorbing iodine like a sponge and of reacting actively to its stimulus. Many indeed of the unexplained good effects observed from using iodine in such a large variety of conditoins are due not to the iodine "per se," but to stimulated and increased thyroid secretion. Iodine's value in chronic skin diseases, rheumatism, acute fevers, nausea of pregnancy, in absorbing new growths, and perhaps even in syphilis, can thus be partly explained.

(1) Archives of Pediatrics, May, 1910.

(2) Monthly Cyclopedic and Medical Bulletin, August, 1910.

SOME PHARMACOLOGICAL AND CLINICAL ASPECTS OF HEXAMETHYLENAMINE

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The purpose of this paper is not to give a text book discourse on the varied actions of hexamethylenamine but to emphasize as *facts* certain cardinal points as they have been worked out from a clinical view point and confirmed in the pharmacological laboratory.

All research work should be undertaken, not with the intent of demonstrating certain points and ideas, but with the sole purpose of ascertaining *actual facts.*

If we start out in an experiment to *demonstrate certain things* we will usually find a way of doing it, but if we go into a subject unhampered by any preconceived ideas and *afterwards form our opinions from obtained facts* our opinions and results will be of *some* value.

Herein is found the reason why we find such diversified views in our various works on materia medica. Some are compiled largely from the faddish opinions of their authors and are frequently, it is true, supported by sound reasoning, but are lacking in the frankness that is seen in the work of trained pharmacologists. They are, therefore, of indefinite value.

Only a very small minority are written and formulated from scientifically obtained data.

The following experiments were performed and charted, and this paper is intended simply to give an intelligent interpretation of the findings. Only rarely have I ventured an opinion unsupported by demonstratable facts.

Hexamethylenamine is a condensation product of the action of four molecules of formaldehyde on six molecules of amonia, viz:

$$4(H_2N-CH_2OH)=(CH_2N_2-6H_2O)$$

It occurs in rhombiodal crystals and is soluble in 1.3 parts of water. When dissolved in an acid medium it readily decomposes into its original constituents.

This last statement must not be misinterpreted for when the drug is injected into the circulation of a rabbit the blood will show the presence of formaldehyde indicating that the hexamethylenamine has undergone decomposition probably within the circulatory system.

The latter assertion is further supported by the fact that when formaldehyde is taken into the stomach of the human subject or rabbit in safe dosage no formaldehyde is found in the urine. So that we are safe in assuming that hexamethylenamine is absorbed *as such* and is afterwards, in part at least, split up within the circulation. This is further indicated, clinically, by the fact that the drug is a far better genito-urinary than gastro-intestinal antiseptic. The assumption being that the only good derived from it on the gastro-intestinal tract is due to the very mild antiseptic properties of the hexamethylenamine. Solutions of the drug (G. M. 1.00 to C. C. 4.00) distinctly retard the growth of the bacillus typhosus in the laboratory, no other kind of bacteria having been used in the experiments.

The urine of a 12 Kilo dog that had received the night before one gramme (approx. 15 gr.) of hexamethylenamine showed the following results. In both animals the urine was acid in reaction, that of No. 1 showing the presence of formaldehyde.

Wt. of dog	Amt. of drug	Dilution 1	2	3	4
[illegible]	[illegible]	No growth	No growth	No growth	Growth
10 kilos	NONE	No growth	Growth	Growth	Growth

[illegible] Medical Society of Virginia at Norfolk, Va., October 28, 1910

It has been demonstrated at the Johns Hopkins Medical School that when hexamethylenamine is exhibited in as much as sixty to seventy-five grains (Gm. 3.90 to 4.88) per day that there is a rapid disappearance of bacteria from the biliary passages and cerebrospinal fluids.

With these few introductory remarks we will pass on to what is probably the most important phase of our subject. I refer to the irritant properties of hexamethylenamine. I speak of the irritant action as being the most *important* factor to be considered for it is not always the virtues of a drug that should be brought out and emphasized—as these are usually well known—but rather those actions that are injurious and dangerous.

We are so frequently blinded by a little knowledge of the good qualities of our therapeutic agents as to entirely overlook the fact that in treating our patients for one malady we may be at the same time ingrafting a condition that may prove more lasting and dangerous than the original disease. This I am afraid, has not infrequently happened in the indiscriminate use of hexamethylenamine.

It is a good thing to have a drug that when given internally will render aseptic our secretions and excretions but it must be remembered that most drugs that have a deleterious effect on micro-organisms, may have an equally vicious action on the animal cells that compose the organs through which the fluids of the body must pass. I know of no organ that it is more vitally important to scrupulously guard against prolonged irritation than the kidneys, and they should be one of the first structures thought of in drug administration.

Any seemingly radical statement that I may make in regard to the unfavorable effects of hexamethylenamine is, in part, inspired by my profound respect for the renal structure.

The virtues of hexamethylenamine are gone into in detail by the various text books and manufacturing houses but they dismiss the subject usually with only a line or so on its possible untoward effects. In fact this phase of the subject is apparently considered entirely unworthy of mention in some of the recent brochures on the drug.

It must not be understood that I am trying to unduly magnify the dangers of this valuable therapeutic agent. What I shall attempt to do is to utter a brief warning against its unintelligent and promiscuous use. Given with painstaking carefulness it is a most valuable excretory and secretory antiseptic, but used with this idea alone it may be the source of grave evil and mischief.

The following experiment conducted in the pharmacological laboratories of the Medical College of Virginia will show the positive irritant properties of the drug. I am indebted to Dr. McCaw Tompkins of Richmond who kindly consented to make check on the chemical and microscopical examinations.

Four dogs were used, each animal being placed in a cage so arranged that the urine could be collected without contamination.

By studying this chart it will be noted that in all of the animals the drug at some time produced symptoms of renal irritation.

In animal No. 1, there was an appreciable diminution in the total quantity of urine passed, it being 50 c. c. less in the first twenty-four hours after he had received only 160 milligrammes (2½ gr.) three times a day. On the fourth day the dosage was increased to Gm. .487 (7½ gr.) t. i. d. and then there was seen a gradual increase in the amount passed for the next four days when there was again noted a very marked drop in the total quantity passed. On the twelfth day albumen, casts and blood were present in profuse quantities. Albumen and casts had appeared on the third day of the experiment.

This animal is taken as presenting a comparatively ideal result, for in the others the albumen, casts and blood appeared much earlier and could be more positively traced to the direct action of the drug because when

	Dose in Grammes t. i. d.				Am't Urine in 24 hours in c. c.				Microscopic Examination.				Qualitative Examination of Urine.				Am't of Water given in 24 hrs. in c. c.			
Dog No	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Mch. 15	162	325	325	325	300	350	300	450	Neg.	Blood profuse	Neg.	Blood	Neg.	Albumen and g. casts	Neg.	Albumen and g. casts	325	325	325	325
Mch. 16	162	None	325	None	250	150	300	400	Neg.	Blood profuse	Neg.	Neg.	Neg.	Albumen marked casts.	Neg.	Neg.	325	325	325	325
Mch. 17	162	None	325	None	270	270	150	600	Neg.	Neg.	Neg.	Neg.	Albumen and casts.	Neg.	Neg.	Neg.	325	325	325	325
Mch. 18	487	162	487	162	200	250	150	200	Neg.	Neg.	Neg.	Neg.	Neg.	Albumen and casts.	Neg.	Neg.	325	325	325	325
Mch. 19	487	162	487	162	200	225	140	210	Neg.	Blood	Blood	Neg.	Neg.	Albumen and casts.	Albumen and casts.	Albumen and casts.	325	325	325	325
Mch. 20	487	162	None	162	350	400	400	140	Neg.	Neg.	Blood	Neg.	Neg.	Albumen and casts.	Albumen no casts.	Neg.	325	325	325	325
Mch. 21	487	162	None	162	325	310	320	150	Neg.	Neg.	Neg.	Neg.	Neg.	Albumen and casts.	Neg.	Neg.	325	325	325	325
Mch. 22	487	162	162	162	450	250	350	500	Neg.	Neg.	Neg.	Neg.	Neg.	Albumen and casts.	Albumen	Neg.	325	325	325	325
Mch. 23	487	162	162	162	400	250	325	350	Neg.	Neg.	Neg.	Neg.	Neg.	Albumen and casts.	Albumen and casts.	Neg.	325	325	325	325
Mch. 24	487	162	162	162	300	225	290	300	Neg.	Neg.	Neg.	Neg.	Neg.	Albumen and casts.	Albumen	Neg.	325	325	325	325
Mch. 25	487	162	162	162	250	195	200	260	Neg.	Neg.	Neg.	Neg.	Albumen and casts.	Albumen and casts.	Neg.	Neg.	325	325	325	325
Mch. 26	487	162	162	162	150	175	175	150	Few red cells.	Neg.	Neg.	Neg.	Albumen and casts.	Albumen and casts.	Albumen and casts.	Neg.	325	325	325	325
Mch. 27	487	162	162	162	175	175	200	250	Hem-orrhage.	Neg.	Neg.	Neg.	Albumen and casts.	Albumen and casts.	Albumen and casts.	Neg.	325	325	325	325

the symptoms of renal irritation were manifested the discontinuance of the drug invariably would cause the urine to clear up.

The amount of urine normally excreted in the twenty-four hours (before the beginning of the experiment), was on an average 300 c.c. and the amount of water given (by the stomach tube) was constantly kept at 325 c.c., which is the calculated requisite amount for animals of this character and size.

In animals Nos. 1 and 2 there was an apparent diminution in the total urine excreted in the first twenty-four hours. In the case of No. 2 the total quantity was diminished by one-half (150 c.c.), and there was a profuse hemorrhage into the genito-urinary tract, probably from the kidneys, as there was a concomitant appearance of albumen and casts in the urine. We, therefore, discontinued the drug and as a consequence there was a prompt increase in the total quantity of urine passed and a complete disappearance of the hematuria.

To make a check upon the above results we resumed the use of the hexamethylenamine on the fourth day to dog No. 2, administering only 160 milligrammes (2½ gr.) t.i.d., which again produced symptoms of renal irritation, i. e., albumen and casts in the urine with slight reduction in the total quantity passed. These results were apparent within twenty-four hours after the resumption of the hexamethylenamine.

We continued to give dog No. 2 Gm .162 (2½ gr.) t.i.d. for the remaining ten days of the experiment with a gradual reduction of the urine passed associated with constant albuminuria.

The same line of treatment was followed in dog No. 3 with approximately the same general results.

In dog No. 4 albumen, blood and casts appeared after the first twenty-four hours' treatment, using Gm .320 (5 gr.) t.i.d. The drug was then discontinued for forty-eight hours, in which time the urine cleared up entirely. We again resumed treatment with Gm .162 (2½ gr.) t.i.d. and continued this amount for the remaining days of the experiment, the only esential results in this case being a reduction of the total quantity of urine excreted, as no more albumen (since fourth day) and casts were noted. This animal was of medium size, weighing about 14 Kilos.

CONCLUSIONS FROM ANIMAL EXPERIMENTS.

1. Medium doses of hexamethylenamine continued over comparatively short periods (10 days) will produce renal irritation.

2. Even small doses, if long continued, may produce irritation.

3. In moderate amounts there is an initial increase in the total quantity of urine passed, due to the primary irritation of the kidney structure, but, if the drug is continued for any considerable length of time, there is a diminution in the amount excreted.

4. Toxic symptoms are only noted where there is severe renal irritation. (Animal No. 2 showed marked tendency to lie about and sleep and altogether looked sluggish and ill, refusing all food while the hematuria was present.)

5. That hexamethylenamine is more effective as an antiseptic if the urine is acid in reaction. It may itself produce in the urine an acid reaction on account of the ammonia radical present, ammonia, as is well known, rendering the urine acid in reaction.

6. The drug—as such—has only mild antiseptic properties and is probably, in part at least, absorbed unchanged.

CLINICAL REPORTS.

Case No. 1.—This case was treated about eighteen months ago when hexamethylenamine was first advocated in very large doses. M.A., age 26 years; married, with two children; weight 150 lbs.

Diagnosis: Acute purulent cystitis.

Patient given Gm .98 (15 gr.) of hexamethylenamine every three hours until Gm 4.87 (75 gr.) for the twenty-four hours had been taken.

Hematuria appeared at the end of the first twenty-four hours. Drug discontinued for seventy-two hours—with a clearing up of the urinary findings—and again resumed. At the thirtieth hour there was evident a profuse hemorrhage into the genito-urinary tract, clots of blood appearing in the urine.

Case No. II.—Treated about fifteen months ago. A.G., male; age 38 years.

Diagnosis: Acute gonorrheal infection of the urethra, bladder, epididimis and testicles with enormous swelling of the parts. Patient had been ill for forty days when we were called in to treat the case.

Along with the other treatment was given hexamethylenamine Gm .65 (10 gr.) every four hours, five doses being given in the twenty-four hours (fifty grains per day).

On the fourth day there was considerable blood in the urine. The drug was therefore discontinued for two weeks and again started in the same dosage. On the third day after its resumption there was a profuse hemorrhage into the bladder (possibly from the kidneys) which caused troublesome retention on account of the many large clots present. These two cases were seen by me through the courtesy of Dr. F. M. Reade, of Richmond, Va.

Case No. III.—Case treated about two years ago. Miss A. K., age 24 years; no history nor present evidence of renal trouble.

Diagnosis: Typhoid fever. Hexamethylenamine was prescribed as prophylactic in Gm .650 (10 gr.) doses t.i.d. On the tenth day there was noted albumen and casts in the urine with a large number of red cells. Drug discontinued with a concomitant disappearance of the hematuria, albumen and casts.

During convalescence the drug was again exhibited in the same dosage with the result that on the twelfth day the same line of symptoms again appeared along with marked evidences of acute cystitis, all of which cleared up when the drug was discontinued.

Case IV.—This case treated about two years ago. Young man between twenty-five and thirty years of age.

Diagnosis: Chronic pyelitis. Hexamethylenamine prescribed in Gm .325 (5 gr.) doses t.i.d. and increased on the second day to Gm. .650 (10 gr.) every four hours. This was kept up for only three days when there was a very profuse hemorrhage. The cause of the hemorrhage was attributed to the disease and not to the drug. The treatment was therefore continued with a gradual increase in the amount of blood passed. For various reasons the drug was stopped with a simultaneous stoppage of the hemorrhage. The drug was again exhibited in Gm .325 (5 gr.) doses every four hours for seven days when there was a recurrence of the hemorrhage It may be remarked that the drug did not cure the pyelitis, but the patient had had no hemorrhage before the treatment was started and has never had a return of the hematuria since.

It must be remembered that this case was also treated when but little was known about the irritant properties of hexamethylenamine, and as hematuria is not infrequent in cases of pyelitis it can readily be seen how the symptoms were not promptly attributed to the drug. (Case of Dr. McCaw Tompkins.)

I have records of a number of cases in which hematuria was produced, but the four cases reported above, coming from the practice of three physicians, seem to me to be ample evidence of the positive danger in the excessive use of hexamethylenamine.

Recently a number of our foremost surgeons who had been in the habit of using hexamethylenamine as a routine in their post-operative work have been forced to discontinue its use after four to eight days' treatment on account of the very large number of cases of so-called post-operative cystitis occurring in those patients who had been given the drug. I could probably get records of from twenty-five to thirty-five cases in Richmond alone of post-operative cystitis that had cleared up after the discontinuance of hexa-

methylenamine exhibited over periods of more than seven days in doses of from Gm .325 (5 gr.) to Gm .650 (10 gr.) t.i.d.

CLINICAL CONCLUSIONS.

1. Great care must be exercised in administering even small doses of hexamethylenamine, certainly when it is proposed to be used over extended periods.

2. Microscopic examinations of the urine in all cases receiving the drug should be made if possible, or, if this be impracticable, daily examinations of the albumen should be made.

3. After the drug has been exhibited for as long as seven days bladder and renal irritation may be expected and must be rigidly sought for.

4. That when given with care and intelligence it is our most potent genito-urinary antiseptic. It is suggested in cases with alkaline urine that some drug be given that will render the urine acid in reaction previous to the administration of the hexamethylenamine, as it seems to act better in an acid medium.

No. 307 East Grace Street.

A RESUME OF CASES OF MALARIA AND OF CASES SUSPECTED TO BE MALARIA. EXAMINED IN THE PAST THREE YEARS.*

(FROM THE POLYCLINIC LABORATORIES.)

By JOHN M. SWAN, M.D.,

Medical Director, The Glen Springs,
Watkins, N. Y.

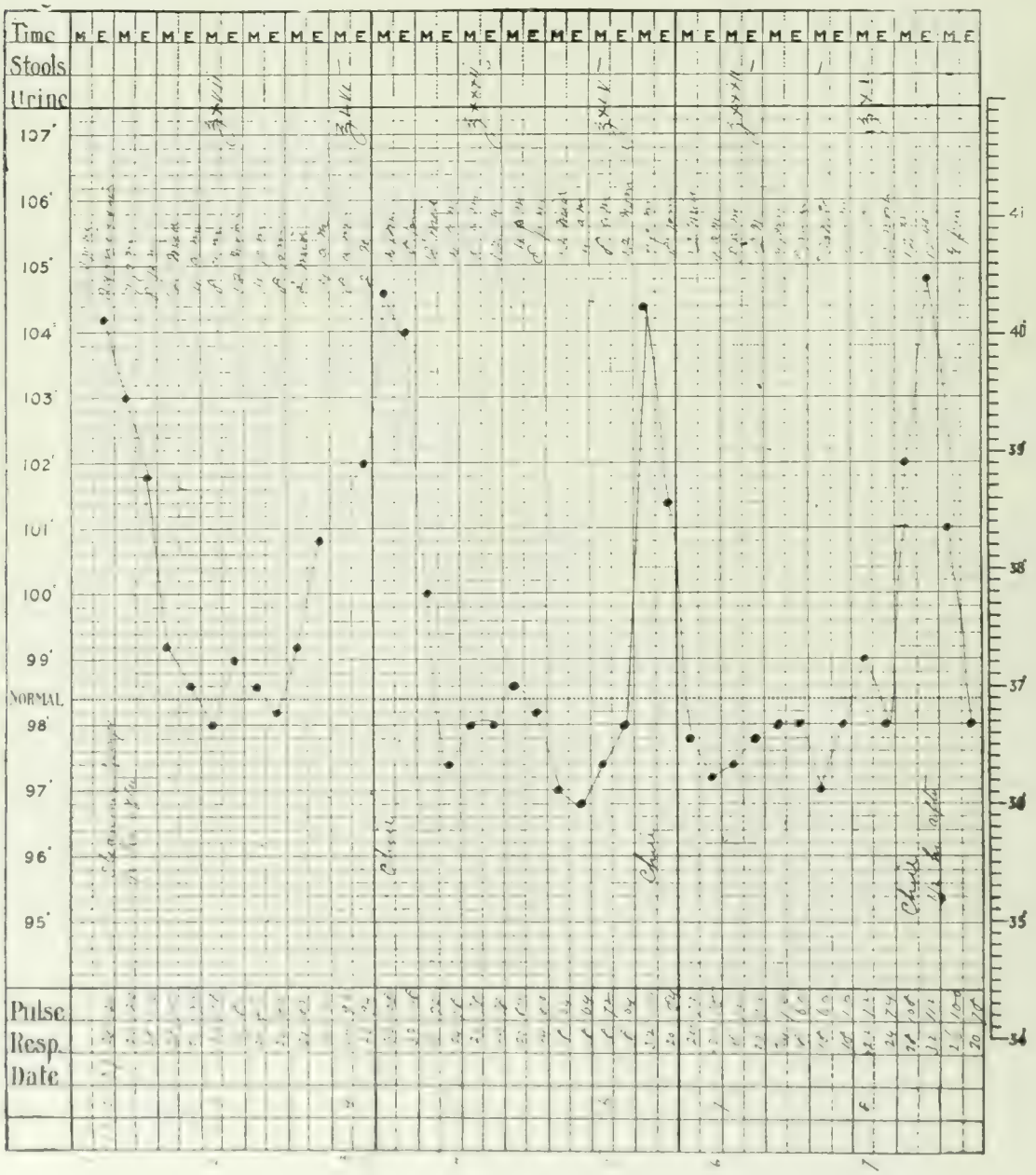
After the inauguration of the course in Tropical Medicine at the Philadelphia Polyclinic, in January, 1907, the physicians in the Polyclinic Hospital were kind enough to refer to me for examination all cases of malaria and all cases in which malaria might be a factor in the clinical course of the disease from which the patient was suffering. I have selected some of these cases for the purpose of this paper, in order to illustrate some of the facts concerning the diagnosis of malaria and to illustrate some conditions that might be diagnosticated malaria clinically, when, as a matter of fact, that disease had nothing to do with the symptoms. The cases include nine of malaria, four of benign tertian infection, two of quartan infection, one of estivoautumnal infection, one of latent malaria, and one of pulmonary tuberculosis and benign tertian infection; one case of sepsis following an operation on the female pelvis; one case of tuberculosis peritonitis; one case of cerebral abscess; one case of splenomegaly; one case of myocarditis; one case of stricture of the urethra; one case of empyema of the gall bladder, and two in which a definite diagnosis was not made.

In the final lecture in his course on tropical diseases at the London School of Tropical Medicine, Sir Patrick Manson is in the habit of advising the students in examining a patient from the tropics to bear in mind that the patient must not necessarily have a tropical disease; never to accept the patient's diagnosis of his condition, and never to accept another physician's diagnosis of the condition. He emphasizes the necessity of endeavoring to find out at first hand the cause of the symptoms of which the patient complains by starting at his head and going to his feet, using all of the methods of examination known to the diagnostitian.

Malaria is the most common tropical disease, and, in temperate climates, the diagnosis of malaria is made on purely clinical evidence too many times. Some of the following cases show how erroneous this diagnosis may be when based on clinical evidence alone. The

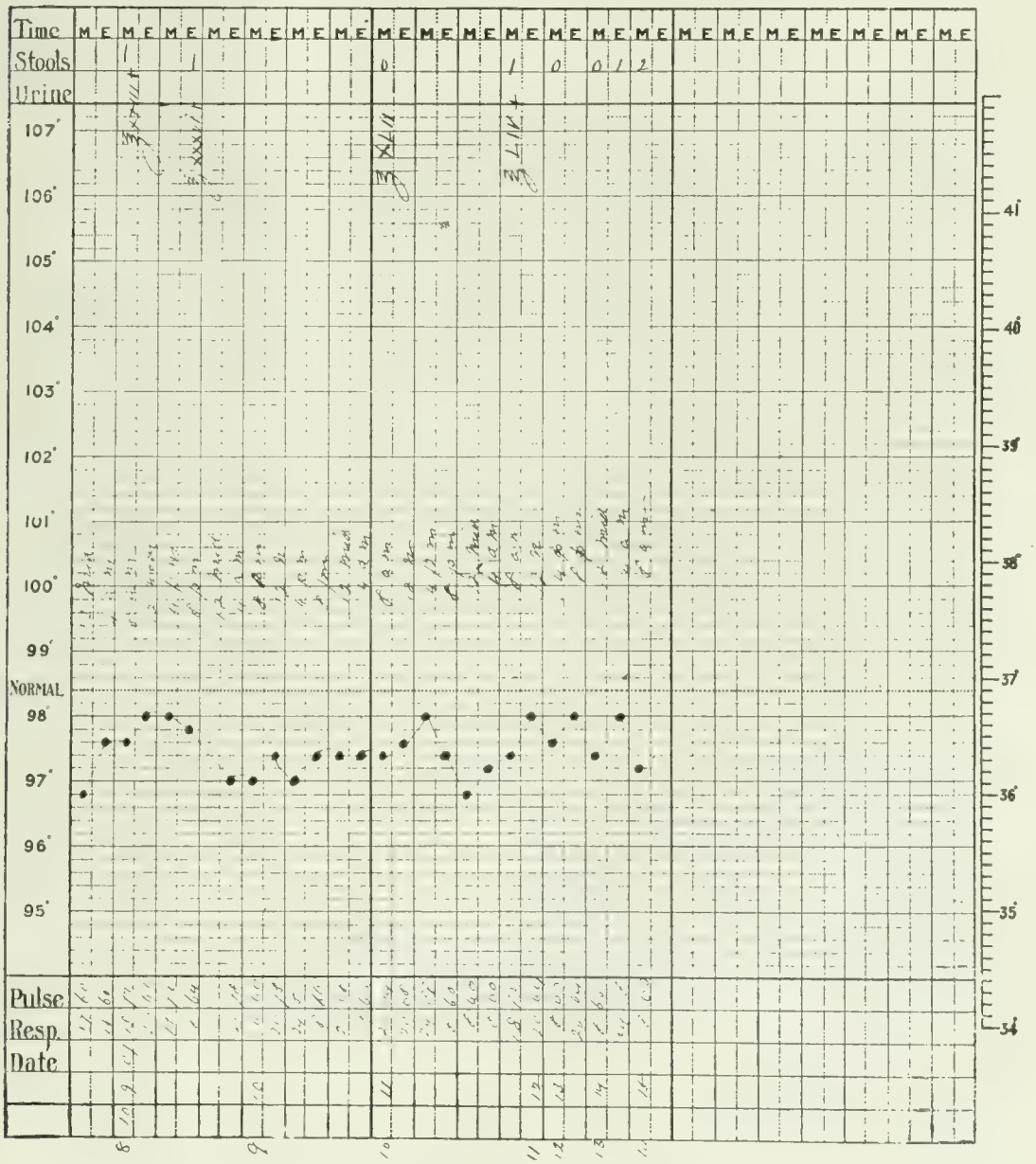
*Read at the Seventh Annual Meeting of the American Society of Tropical Medicine, held in St. Louis, June 11, 1910.

symptom complex of chill, fever, and sweat is common to many diseases, among them malaria. The shortest way to the diagnosis when the patient complains of these symptoms is to say that the condition is due to malaria and administer quinine. Modern methods have shown that the only proper way to arrive at a diagnosis of malaria, either acute or chronic, is after the demonstration of parasites in the peripheral blood. There be many men who have not yet accepted this method of arriving at a diagnosis of malaria and who still adhere to the old method of making a diagnosis on the clinical manifestations. Among the diseases that stimulate malaria in clinical manifestations are stricture of the



urethra, abscess of the liver and other purulent collections about the liver, all septic processes, myocarditis, tuberculosis, syphilis and occasional cases of beginning leukemia.

One of the cases of quatran malaria and the case of estivoautumnal malaria were reported before this society at its meeting in 1909. (*New York Medical Journal,* July 8, 1909.) The other case of quartan malaria and the cases of benign tertian malaria showed nothing particularly interesting or unusual. Three cases of benign tertian infection and the case of quartan infection showed an increase in the large mononuclear leukocytes upon making a differential count: 23.4 per cent, 17.2 per cent, 11.4 per cent, 19.4 per



cent. One of the cases of benign tertian malaria did not show an actual increase in the percentage of large mononuclear cells, 9.6 per cent being recorded. In one of the cases of benign tertian malaria the paroxysms occurred at 4 P. M., in one at 11:30 A. M. and in two the actual hour was not recorded, but in one of these the paroxysms occurred in the afternoon and in the other they occurred in the morning. In the case of quartan malaria the paroxysms occurred at 11:00 A. M. The histories of these cases follow:

CASE 1 BENIGN TERTIAN MALARIA.

Male, white, aged 18 years, occupation factory hand, a native of Russia, was admitted to the hospital (No. 14687) in the service of Dr. A. A. Eshner, with a diagnosis of benign tertian malaria.

Family history: Negative.

Previous history: Negative.

Present trouble: For two months before the patient had complained of headache and chilly sensations. He had no distinct chills and no nose bleed. A few days before admission he began to complain of pain in his back and legs and the day before admission he had a distinct chill. On admission his temperature was 104 degrees, pulse 120, respiration 28. On the day after admission the temperature did not rise above 99 degrees, but on the following day it rose to 104.6 degrees, accompanied by a chill. On the day following that the highest temperature recorded was 98.6 degrees. The following day the temperature rose to 104.4 degrees, accompanied by a chill. On the following day the highest temperature recorded was 99 degrees. On the next day the temperature again rose to 104.8 degrees, accompanied by a chill. At the time of examination the blood count gave the following result:

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	19.4 per cent
Large Mononuclears	23.4 per cent
Transitionals	3.4 per cent
[illegible]	2.4 per cent
[illegible]	0.4 per cent
	100.0 per cent

Red cells slightly altered in size. Slight granular degeneration. In counting 100 leukocytes 18 tertian parasites were seen, chiefly half grown rings.

CASE 2.—BENIGN TERTIAN MALARIA.

Male, white, aged 29 years, occupation driver, native of New York, was admitted to the hospital (No. 14163) in the service of Dr. David Reisman, with a diagnosis of benign tertian malaria.

Family history: Negative.

Previous history: Negative.

Present trouble: For the past four years the patient had been working in Missouri. During this period his health has always been good, but in January, 1907, while working in a swamp where a good part of the time he had to stand in water, he had an attack of chills and fever. He never fully recovered from this attack and has had more or less chills and fever for weeks. At first the attacks came on every second or third day in the early afternoon. On admission to the hospital he complained of pain in the precordium, slight cought without expectoration, headache, vomiting and poor appetite. Examination of the urine gave the following results: Color, straw; reaction, alkaline; specific gravity, 1.010; no sediment, no albumen, no casts.

The blood examination gave the following results: Erythrocytes, 2,730,000; leukocytes, 17,000; ratio, 1,160; hemoglobin examination not made. Differential count:

[illegible]	73.6 per cent
[illegible]	7.8 per cent
[illegible]	17.2 per cent
[illegible]	0.6 per cent
[illegible]	0.2 per cent
[illegible]	0.4 per cent
[illegible]	0.2 per cent
	100.0 per cent

Forty-three malarial parasites were seen to ten leukocytes. Benign tertian rings and

gametocytes. Schuffner's granules well marked.

The patient had three distinct malarial paroxysms while under treatment in the hospital, the maximum temperature being 104.8 degrees, 104.8 degrees and 106 degrees respectively. On the alternating days the patient had an abortive paroxysm, the temperature reaching 101 degrees and 102.8 degrees respectively. During the progress of the case the red blood corpuscle count rose progressively.

CASE 3.—BENIGN TERTIAN MALARIA.

Male, white, aged 23 years, occupation dishwasher. Was admitted to the hospital (13549) in the service of Dr. A. A. Eshner, with a diagnosis of malaria.

Family history: Negative.

Previous history: The patient was an Austrian. He had been in this country for five years. He had never had an attack similar to the one for which he was admitted. At the age of 14 he had an attack of pain in the left inguinal region from some unexplained cause. At the age of 18 he had an attack of fever which kept him in bed for three weeks. He had not felt well since that time, although he had never complained of any acute disease. During the past year he had lost 25 pounds in weight and had had night sweats occasionally.

Present trouble: For the past two months the patient had had a cough; at first the cough was very tight and troublesome, but lately it had been looser and not so troublesome. During this period the patient had had very severe chills followed by fever at irregular intervals, except the last three attacks, which occurred at intervals of four days. At one period he had four chills on each of four successive nights at 7 o'clock. During part of this time he was in Tennessee and Virginia where he took quinine. On the day of his admission to the hospital he had been in Philadelphia but a short time and had been complaining of chills ever since he reached the city. Upon admission his temperature was 105.2 degrees; pulse, 120; respiration, 24. The liver dullness extended from the fifth interspace to the eighth interspace; its edge was not palpable. The splenic dullness began at the seventh rib and extended to the eleventh rib; its edge was not palpable. Malarial parasites were found in the blood. The temperature dropped to normal in about fourteen hours and did not exceed the normal after that time during his stay in the hospital.

A blood examination made the day after admission gave the following result:

Erythrocytes	5,31[illegible],000
Leukocytes	9,000
Ratio	1 : 553
Hemoglobin, per cent	57
Color Index	0.55

Differential Count

Polymorphonuclear neutrophiles	73.2 per cent
Lymphocytes	15.4 per cent
Large Mononuclears	7.4 per cent
Transitionals	1.0 per cent
Eosinophiles	0.4 per cent
Basophiles	0.4 per cent
	100.0 per cent

Numerous large and small tertian rings and gametocytes were seen; 177 parasites were seen in counting 100 leukocytes.

Here is a case of benign tertian malaria in which no increase of large mononuclear leukocytes is recorded. The infection was evidently of fairly long standing.

CASE 4.—BENIGN TERTIAN MALARIA.

Male, white, aged 23 years, occupation painter, was admitted to the hospital (11701) in the service of Dr. R. Max Goepp with a diagnosis of malaria.

Family history: Negative.

Previous history: Negative.

Present trouble: The patient was referred to the hospital wards complaining of headache, chills and constipation. During his stay in the ward he passed several adult ascaris lumbricoides worms. On admission his temperature was 101 degrees, pulse, 86; respirations, 26. The afternoon temperature on the day following admission was 99.4 degrees. The morning temperature on the

following day was 100 degrees. The fourth day of his stay in the hospital his temperature was normal; the following day it rose to 100.6 degrees and on that day the blood examination showed benign tertian parasites and the following differential count:

Polymorphonuclear neutrophiles	77.0 per cent
Lymphocytes	10.4 per cent
Large Mononuclears	11.4 per cent
Transitionals	0.4 per cent
Eosinophiles	0.6 per cent
Basophiles	.2 per cent
	100.0 per cent

CASE 5.—QUARTAN MALARIA.

Female, white, aged four years, was treated in the dispensary service of Dr. Samuel McC. Hamilton (No. 2235) for malaria.

Family history: Negative.

Previous history: The child was born in Naples and had come to the United States six weeks before she was first seen in the dispensary. She had had measles, whooping cough and what was called scarlet fever. With this disease the patient was sick for six weeks and she had had numerous attacks of fever since.

Present trouble: The patient complained of fever. She got a chill about 11 o'clock every third day which lasted for an hour. This was followed by fever which lasted about six hours, when the fever disappeared. During the attack of fever the child was yellowish. Upon making a physical examination the important points developed were that she had a sallow complexion and marked enlargement of the liver and spleen. Between the attacks of fever the child had a poor appetite and played but little. In the recumbent position the heart showed a well-marked late systolic murmur in the second and third interspaces, which was not heard in the upright position and which was not transmitted. The spleen extended two inches below the costal margin. The liver was palpable an inch and one-half below the costal margin. Examination of the blood made when the temperature was 104 degrees gave the following results:

Erythrocytes	6,700,000
Leukocytes	5,920
Ratio	1—1,131
Hemoglobin, per cent	68
Color Index	0.50
Differential count	
Polymorphonuclear neutrophiles	50.6 per cent
Lymphocytes	27.4 per cent
Large Mononuclears	19.4 per cent
Transitionals	0.8 per cent
Eosinophiles	1.2 per cent
Basophiles	0.4 per cent
Myelocytes	0.2 per cent
	100.0 per cent

In counting 500 leukocytes, 125 medium sized quartan rings were found.

CASE 6.—LATENT MALARIA.

Female, black, aged 28 years, occupation dressmaker, a native of Jamaica, was admitted to the hospital (14788) in the service of Dr. W. M. Sweet, with a diagnosis of cyclitis.

Family history: Negative.

Previous history: Two years before coming to the United States from Jamaica, while she was a resident of the island of Jamaica, she had malaria, but did not know what variety.

Present trouble: The patient thought she caught cold at the time of the earthquake in Jamaica. She complained of pain in the left eye, headache and fever. About two weeks after the beginning of the pain a film formed over the eye which obscured her vision. She frequently complained of backache. The eyeball was enucleated under aseptic conditions during her stay in the hospital. The urine was amber in color; acid in reaction; 1.024 in specific gravity; presented a moderate amount of sediment composed of leukocytes, uric acid crystals and amorphous urates. There was no albumen and no glucose. The feces were examined and one ascaris lumbricoides ovum was found. The blood examination gave the following result:

Erythrocytes	3,810,000
Leukocytes	7,000
Ratio	1—505
Hemoglobin, per cent	80
Color index	1.04
Differential count	
Polymorphonuclear neutrophiles	64.6 per cent
Lymphocytes	11.8 per cent

Large Mononuclears	17.4 per cent
Transitionals	4.0 per cent
Eosinophiles	2.2 per cent
	100.0 per cent

In counting 500 leukocytes, one cell, resembling a partially degenerated gametocyte, was seen.

The patient's temperature while in the hospital did not reach 100 degrees at any time.

In this case the fact that the patient was a native of Jamaica and had been in this country but a short time when she was admitted to the hospital for a distinct ophthalmological condition rendered the blood examination of interest. The examination showed a moderate reduction of the red cells, a slight reduction in the number of leukocytes, a high color index and a high large mononuclear percentage (17.4). During the enumeration of 500 leukocytes one cell resembling a partially degenerated gametocyte was seen. It would appear that this is a case of latent malaria, and it would also appear that under favorble conditions this patient might develop an acute attack of malarial fever of some kind.

(TO BE CONTINUED.)

PAIN IN ABDOMINAL DISEASE.

By WILLIAM M. HARSHA, M.D.,
Chicago, Ill.

Pain as a symptom in abdominal disease has increased in importance since surgery has shown the evolution of pathological conditions. It is so common, and appears in such a great variety of conditions, both grave and trivial, that it is likely to receive too little attention in a given case.

Being subjective it varies with the different nerve states of the individual, as in rest or fatigue, febrile conditions, anemia or general debility, and in different persons in similar conditions of health owing to their individual susceptibilities.

Sometimes pain is present with no appreciable pathology and absent in grave lesions, e. g., an indigestion may be more painful than cancer of the stomach or tuberculosis of the peritoneum. As a rule, however, the character and severity of the pain bear a rather definite relation to the gravity of the lesion. As examples may be mentioned the very great prostrating pains due to acute perforations of the stomach, gall bladder, intestine, appendix or Fallopian tubes.

To be properly interpreted a most careful history is necessary, as pain must be considered in relation to other factors in a given case, and without these loses its chief importance.

The time relation is most valuable. As an illustration may be mentioned the rather charactertistic sudden initial pains of acute appendicitis, which every alert physician now regards as an indication to search for a tender point, and be on the lookout for the other classical symptoms in their proper order. And yet it is within the memory of most of us, perhaps, that these same initial pains conveyed no definite idea of the associated pathology.

The relation of pain to taking food is also of great value, especially in duodenal or gastric ulcer or the various stenoses, benign or malignant. The relation to body movement or position, to exertion, straining, coughing or sneezing are all to be considered. Also any association with vomiting, constipation, peristalsis, distention, or jaundice must be duly considered.

The direction and extent of painful radiations, and the association with hyperaesthesia, local tenderness and muscular rigidity are of the greatest importance both as indications of the site and gravity of the lesion.

The arm pains in angina pectoris, the shoulder or upward radiations in gall-bladder disease, and the downward forward and testicular pains in nephritic colic are well known examples.

We may have the greatest variety of painful sensations in the same gross lesion, as illustrated by the dull ache, acute burning or colic or the terrific pain with collapse of (perforated) gastric or duodenal ulcer.

The pain of abdominal disease may be either spontaneous or elicited by pressure, body movement or position, and may be influenced by psychical, thermic, mechanical or chemical means, all of which may be utilized on occasion to aid in exactness of diagnosis. Therapeutic agents again may aid us, as for example the use of alkalies or cocaine in supposed gastric ulcer, or the iodides in syphilitic perihepatitis, or, quite as important, the use of cathartics in impactions.

The general law obtains that diseased viscera cause pain at or near their various sites, but there are many exceptions, which lend importance to the reflex or referred pains. This applies to both spontaneous and elicited forms. In most visceral lesions there is a disturbance manifested variously by pain, tenderness, hyperaesthesia or muscular rigidity of certain areas of the external or protective portions of the body. Hilton (Rest and Pain) called attention clinically to the protective function of the muscles in joint disease, and later the mechanism has been shown to be a reflex by other investigators.

Pottenger, of California, has recently shown the motor reflex in diseases of the lung and pleura. Sensory reflex is also recognized in both conditions named. This exteriorization of pain, hyperaesthesia or rigidity as a reflex may be of great aid in diagnosis or may mislead one if the fact of the reflex is ignored or the nerve supply is not understood. Clinically increased importance attaches to the reflexes both dorsal and abdominal as aids to more accurate diagnosis.

Reasoning from the demonstration of Haller, Harvey, Lennander and others, that the viscera are in health insensitive to ordinary irritative stimuli, and incapable of accurate localization of painful sensations, and from the exalted sensory and motor function of the protective portions of the body, e. g., the abdominal wall, Mackenzie (Symptoms and Their Interpretation) ascribes nearly all the pain in visceral disease to the reflexes, and ascribes the tendency in many visceral lesions to produce pain referred to the epigastrium or other median portion of the abdomen to the fact that the spinal nerves abundant in skin, muscular and periperitoneal fascial layers of the abdomen have their termini toward the middle line.

The involvement of the solar plexus, of course, accounts in a general way for the more central abdominal pain in various visceral lesions.

On the theory that the pain in visceral disease is largely reflex we can best account for the enlarged area of pain, rigidity, tenderness and hyperaesthesia occurring in fulminant cases.

Sherrington (Integrative Action of the Nervous System), says: "That in spinal reflexes, increase of the intensity of the exciting stimulus causes increase in the number of motor neurones excited is clearly shown by the wider musculature seen to be engaged as the reflex irradiates under intenser stimulation."

Probably the most severe attacks of abdominal pain are due to the various acute perforations, e. g., intestinal gall-bladder or tubal. These are associated with wide areas of pain, hyperaesthesia and muscular rigidity; in fact, the whole abdomen is seemingly involved while the lesion may be limited to a square inch or two in extent.

In cases with broad radiation of pain the behavior of the reflexes under anesthetics or analgesics may aid us in locating the site of disease, as clinical experience seems to show

that the marginal pains are the first to disappear under narcotic remedies.

Sherrington (p. 80, as above), says: "Reflexes are nevertheless among the earliest reactions to alter or fail under asphyxial conditions," and "again the dosage of chloroform or ether required to depress and abolish a nerve trunk conduction is much greater than is required to depress or abolish the cerebrospinal reflexes."

Dr. J. H. Keay in his work on the medical treatment of gall stones (quoted by Mackenzie), refers to this observation and gives his own experience with chloroform during an attack of gall-stone colic: "Give a whiff of chloroform, not enough to produce unconsciousness and the distant referred pains disappear, their mode of disappearance being very interesting to any one cool enough to observe it, and there remains only subdued pain in the region of the right hypochondrium, a spot so small that one could cover it with the tips of one or two fingers."

In a few cases I have noted similar limitation of pain in abdominal lesions exciting broad radiations by opiates, and although one cannot generalize from a few cases, I believe we can in some of these urgent cases arrive at a localization in this way.

While it is generally poor practice to use opiates in cases with doubtful diagnosis, I believe after carefully noting the character and severity of the pain as well as the areas involved and the extent of the radiations, we may be able in many cases to locate the trouble by use of carefully administered anesthetics or opiates, watching the result in abolishing the pains. This applies, of course, to those prostrating acute attacks in which there is urgent need of prompt diagnosis and relief.

There is another class of cases where we should sometimes wish to revive a latent pain for purposes of localization. Every surgeon is called upon to operate cases referred to him between attacks, e. g., appendicitis, gall stones, etc. It has been noted that various conditions invite recurrence of pain. In chronic appendicitis or salpingitis, for instance, exercise or fatigue may bring out the pain. Cathartics may provoke anew the pains of appendicitis, and cold excite peristalsis in stenoses. It is assumed that a sufferer from one of these chronic or recurring diseases has a sensitized or irritable nerve tract, or a point of least resistance to pain. In these conditions a shock or fright will sometimes call attention to these latent pains.

Reasoning from the fact that a moderate shock or fright will emphasize a vanishing or latent pain, I have tried the faradic current in suitable cases and in a few instances I have been able more definitely to locate the trouble. The experience is too limited to make generalization, but slight as it is I am encouraged to pursue it on occasion.

It is not intended here to consider in detail different lesions with their characteristic pain. A great deal has been written on this phase of the subject. The result of the work to date has been a more prompt recognition of appendicitis, gall stones, ulcerations, intestinal obstructions, perforations and other dangerous conditions, and a great saving of life by early operation.

It should be emphasized that a great majority of abdominal diseases, especially of the more acute variety, are first heralded by pain rather than by change of size, position or other physical conditions.

It is recognized by surgeons generally, I think, that in the bright lexicon of abdominal diagnosis there is still nothing so uncertain as a sure thing. If we may not always locate a lesion with exactness we can at least often gauge the urgency in a given case by the character and severity of pain and call to our aid such means as are available.

Bearing in mind the reflexes and the diseases of the nervous system we may avoid abdominal section in early thoracic inflammation or diseases of spine or cord or in hysteria.

Taking account of the value of pain associated with local distensions and peristalsis, or the absence of peristalsis, we may locate a stenosis or other forms of obstruction, calling to our aid submerged palpation (or palpation in the bath), we may detect induration otherwise not palpable.

Observing the time relation of pain to other symptoms ,the effect of food, drugs (cathartics included), cold, fatigue, movement, position, jarring, fist percussion, anesthetics, opiates or electric stimulation we should be able to increase our percentage of correct diagnosis, "a consummation devoutly to be wished."

In abdominal diagnosis it is essential that the physician or surgeon should know all the pathological conditions that may cause pain, and he should be familiar with the associated factors that may aid in its interpretation.

The safety of abdominal section may have caused us to relax our efforts at exact diagnosis. If all operations were reported, we should find a rather large per cent of mistakes. It has happened many times that laparotomy has been done for appendicitis when a movable kidney, a spine or nerve lesion, pyelonephritis, ureteral stone, typhoid fever, diaphragmatic pleurisy, salpingitis, or other conditions were present. Deaver quotes Monihan in report of forty-nine cases of perforated duodenal ulcer operated upon, in eighteen of which a diagnosis of appendicitis was made.

Age, sex, occupation, or previous history may give valuable aid. In childhood intestinal troubles prevail, and we are likely to encounter appendicitis, intussusception, or tuberculosis. In advanced age malignant disease. In women the pelvic organs are frequent sites of disease, while gall-stones are more frequent. In younger women with anaemia and indigestion we may suspect ulcer of the stomach.

Lead colic may simulate organic disease. A history of indigestion, with vague epigastric pain, may aid in determining a perforation of duodenum, or stomach, coming on suddenly as a sequel, and a record of previous inflammatory trouble in the abdomen may explain a sudden intestinal obstruction.

Among the less frequent conditions may be mentioned the meterorism with abdominal pain, resulting from the embarrassed portal circulation in cardiac insufficiency. I have recently seen a case of this kind where the pain was so pronounced and distension so great that abdominal disease or tumor was suspected by one physician.

In a broad survey, we should consider the possibility of disease of the central nervous system, such as tabes, herpes or hysteria, diseaes of the spine, as caries, or spondylitis deformans. We should also consider the possibility of disease of the thorax, referring the pain and rigidity to the abdomen, or of one kidney, referring the pain from stone to the opposite side. Excluding pain from cord, spine or reflex causes, we should remember that diseased viscera may be at the normal site, displaced especially by prolapse, or transposed. We should be awake to the urgency of pain of the first class, viz., the acute prostrating pain with collapse, such as the various perforations, acute hemorrhagic pancreatitis, or embolism of mesenteric vessels, watchful in pain of the second grade for the evolution of determining symptoms, such as appendicitis, gall-stones, or renal colic; while in the third, or subacute, recurring and more vague variety, we should apply such various tests as may aid us in working out a diagnosis. On the surgeon, perhaps, falls the burden of responsibility for exact diagnosis, as his operative experience should add to his knowledge, and to the surgeons of this country, especially to such men as Murphy, Deaver, Mayo and others, we owe largely the credit for the promptness with which abdominal diseases of the more acute varieties are now generally treated.

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Next Meeting Hattiesburg, Miss., November 11-13, 1911.

Notice of Change in Editorship of The Southern Medical Journal

When we, the Editors and Staff, as well as owners of the SOUTHERN MEDICAL JOURNAL established what we regarded as a strictly first-class monthly for the dissemination of original work of the high-class medical men of the South some years ago we did it with a patriotic desire to establish a journal worthy of this section of the country. In doing so we realized that in selecting our advertisements only from the ethical side of medicine that we could not hope nor did we expect or desire a money-making scheme.

It is with a great deal of pride that we announce to our friends throughout the country that the SOUTHERN MEDICAL JOURNAL had reached a point where it was self-sustaining, and this splendid condition of affairs was brought about without besmirching its pages with any questionable reading or advertisement matter. When Dr. Seale Harris, and Dr. H. A. Moody, of Mobile, Ala., than whom there are no higher class ethical gentlemen in the profession in this country, as editors of the *Gulf States Journal of Medicine and Surgery*, which is the official organ of the Southern Medical Association, made us a proposition by which a consolidation of the two journals could be made without lowering the standard of excellency and with the full understanding that the high ideals so manifest in our journal should be the standard of the consolidated journal, feeling that in union there is strength, and that the Southern Medical Association, which is composed of high-class scientific Southern men, deserves the best, we, after due consideration, agreed to the consolidation.

It is with a great deal of pleasure that we announce that five of the strongest members of our staff will be associated in the work of the new journal, and that it will be published in Nashville, where we can more effectually assist in its growth and development, as well as to bespeak for it the patronage of this section of the South.

In retiring from the active management, the

Editor-in-Chief of the SOUTHERN MEDICAL JOURNAL desires to express the most sincere appreciation on behalf of its staff and himself of the medical men of the South who, by their fidelity and friendship, made it possible for us to succeed, and to bespeak for the new management the same loyalty and personal interest on the part of our friends for the success and future prosperity of the JOURNAL under its new management.

JOHN A. WITHERSPOON, M.D.,
Editor-in-Chief.

December 2, 1910.

Consolidation.

We sincerely believe that the medical news we announce under the above heading is of great importance to the medical profession of the South. The two medical journals which have pre-eminently represented the progressive element of the profession in the South have joined forces in the good work of disseminating new and useful professional knowledge, elevating professional standards and purifying medical journalism of the destroying taint of commercialism.

The Southern Medical Journal, edited and published in Nashville by Dr. J. A. Witherspoon and associates, and the Gulf States Journal of Medicine and Surgery, published in Mobile, Ala., by Dr. Seale Harris and Dr. H. A. Moody, have consolidated. Hereafter they will be issued, monthly as before, as one journal. The new monthly will be edited and published by members of the staffs of both journals.

Dr. Seale Harris will act as Editor in Chief, Dr. Moody as Managing Editor, and together they will assume most of the unavoidable hard work pertaining to the publication; and Doctors Witherspoon, Haggard, Litterer, Bryan and others of Nashville will act as Associate Editors, thus retaining the energy, intelligence and wisdom that made of the Southern the leading medical periodical in its part of the country, that inspired the effort to purify medical journalism, and to elevate Southern medicine to the high plane where it belongs.

The same high, altruistic spirit that, regardless of financial loss, declined all advertisements of unethical proprietary medicines is evident in their consolidation with the Gulf States Journal. From a financial, editorial or mechanical point of view there was no necessity for it. Their motive had a higher origin. Dr. Witherspoon and his associates were enlisted in the struggle for purer drugs, better medical instruction, higher medical ethics and more upright medical journalism. They realized that the two medical journals in the South that could accomplish most along those lines were in business competition with each other.

They saw that these two journals, if united, could accomplish, not twice or thrice, but many times the good that was possible to them so long as each was a source of weakness to the other. It was, therefore, decided best to consolidate the two journals and while the arrangements were conducted according to the strictest business principles, yet the motive that prompted the action in the first place was devoid of selfish consideration, and therefore altruistic.

And now it is up to the consolidated journals to work with might and main to accomplish the objects both had set before them.

There is much in a name. The Gulf States Journal of Medicine and Surgery, Journal of the Southern Medical Association has made a record during its brief existence which we do not believe has often been equaled in a like period. But its title indicated a circumscribed territory within the larger boundaries of our beloved South. The new journal embraces the interests of it all, from the Ohio to the Everglades.

What better name can there be to express its territorial influences than *"The Southern Medical Journal?"* Moreover, as it believes firmly that organization is the key to progress, and as it is formally and lawfully the official

organ of the only broad medical organization of the South, the fact also should be shown in the title. Therefore the consolidated journals will be called, *The Southern Medical Journal, Journal of the Southern Medical Association.*

Salutatory.

With this number we make our introductory bow to a large number of readers who have not heretofore been accustomed to receive a journal edited by the present staff, for many subscribers to the Southern Medical Journal of yesterday were not also supporters of the Gulf States Journal of Medicine and Surgery. It is to such new friends that these paragraphs are chiefly addressed. Old subscribers to the last named publication need no introduction to the Southern Medical Journal as now constituted, for in its consolidated form they will recognize the elements that made the Gulf States Journal so successful, to which the consolidation has added most of the excellent features that helped to elevate the Southern to the enviable position it occupied.

Of those features we retain, for instance, the co-operation and assistance of the leading members of the editorial staff, headed by that able physician and prince of Southern gentlemen, Dr. J. A. Witherspoon.

The broad, double column page also, so much easier on the eyesight than lines that reach across the page, has been retained, and a cover which follows in many respects the style of the former Southern Medical Journal. In the body of the Journal we follow the previous plan showing the name of the contributor and his subject at the top of each right-hand page, and the title of the Journal at the top of each left-hand page; and some other technical details not necessary to mention.

To our new readers, one and all, we beg to say that this is your Journal, more than it is ours. It can exist only on the breath of your approval. Its pages are open to your contributions, which are earnestly solicited. The South is full of physicians who carry in their note books or memories many items of valuable knowledge, gleaned from clinical observation, which it is their duty to give to the profession and which we shall be delighted to publish. Just so that it is an established truth is all we care for. Send it to the Journal.

Again, it shall be our constant aim not only to continue to satisfy the taste and wishes of our former patrons, but also to demonstrate to new ones that none of the excellent characteristics of the old Southern Medical Journal are lost by the consolidation, but they still control their former departments, and that new and desirable elements are added to them.

Our policy of not accepting or renewing any contracts for advertising proprietary remedies until they were approved by the A. M. A. Council was common to both Journals, and still continues, and our motto, which we sincerely strive to live up to, still reads *"The Truth, and Only the Truth, on Every Page from Cover to Cover."*

Readers, don't you think you can support such a Journal?

Our Advertisements—Explanation.

Readers of the Southern Medical Journal before the present issue will notice quite a number of advertisements in this number that have not heretofore appeared there. Moreover several of them are of medicines that have not been approved, or have even been condemned, by the A. M. A. Council on Pharmacy and Chemistry.

The explanation is that the former business manager of the Mobile Medical and Surgical Journal, before it passed under the control of the present management last May, had made some long time contracts for advertising these preparations, and these contracts must be fulfilled. But some of them have already been completed and the advertisements dropped, while the remaining ones will soon be matters

of the past. Indeed this is the last appearance of a number of them. On the first of January, 1911, about fifteen pages of advertisements of proprietary preparations that appear in this number, will be dropped from the Southern Medical Journal, as their contracts expire December 31, 1910. There was one such advertisement which, through a misunderstanding, was contracted for by the Southern Medical Journal, but the manufacturers held us to the contract and it will have to be carried out. The present and former editors and managers of the Southern Medical Journal and Journal of the Southern Medical Association have never solicited or made any contracts for advertising proprietary medicines that have not been approved by the Council on Chemistry and Pharmacy of the American Medical Association, and we are, therefore, under no obligations to any pharmaceutical houses. We can make the fight untrammeled for pure and ethical drugs; and we hope that our readers will aid in this great conflict. We respectfully request our friends to exercise patience for a little longer time, when our advertising pages will be as ethical as we try to make all the rest of the Journal for which we are responsible.

The Nashville Meeting.

THE SCIENTIFIC WORK.

The recent meeting of the Southern Medical Association was a great success from every view point. No meeting of the Association, or of any other medical organization, ever had a better array of scientific and practical papers, and the discussions were also of a high order of merit. Those who were interested in Medicine were delighted with the work done in that section; others who participated in the Section on Surgery expressed themselves as being highly pleased with the meeting; while all the Ophthalmologists agreed that the papers and discussions in their Section were the best in the history of the Association. Competent stenographers with Mr. William Whitford, the greatest of all medical reporters, were employed in each of the three Sections, and the papers, with discussions, will appear in the Journal each month until all have been published.

ADDRESS OF WELCOME.

The general sessions were of unusual interest. The address of welcome, in behalf of the Nashville medical profession, by Dr. W. D. Haggard, was a gem of eloquence and proved to those present that Dr. Haggard is an orator in addition to being a scientific and practical surgeon. Dr. Seale Harris, in behalf of the Association, responded to the address of welcome.

DR. MURPHY'S ADDRESS.

The address by Dr. J. B. Murphy, of Chicago, President-elect of the American Medical Association, who is recognized as America's greatest surgeon, was one of the most important features of the meeting. His subject "Surgery of Bones and Joints" was handled in a masterly way and showed the wonderful advances that have recently been made in that important branch of surgery, much of which is, and should be, credited to Dr. Murphy. The address was delivered without notes and while we have the full stenographic report of it, Dr. Murphy had promised when his data is completed, to give it to the Journal of the American Medical Association. We therefore, with regret, yield to his desires, though we publish in the proceedings of the first general sessions an abstract of the address.

PRESIDENT CRAWFORD'S ADDRESS.

The very able address of President Crawford contains much of interest to all Southern physicians. It appears in this issue of the Journal and should be carefully read by every member of the Southern Medical Association. It contains a number of recommendations regarding the policy of the Association which were re-

ceived most favorably. We are pleased to state that the merger of medical journals which we suggested, has been accomplished, and, with the co-operation of our Nashville confreres, who are as much interested as before in establishing a first class medical journal in the South whose advertising pages are free from unethical proprietary medical literature, we hope, as President Crawford suggests, to publish a journal, "whose superiority shall give it a passport into every doctor's library in the South, and guarantee a satisfactory expansion of the Southern Medical Association."

SCIENTIFIC ADDRESS.

The address of Dr. A. B. Cooke, entitled "Safeguarding Society from the Unfit" at the general session on Wednesday night presented the question in an able and practical manner. The suggestion of vasectomy on the incurables among the defective and criminal classes, as practiced to a limited extent in Indiana, is worthy of consideration and we commend to our readers the careful study of Dr. Cooke's address and also the remarks and resolution offered by Dr. George Price of Nashville.

Dr. Haggard's paper, illustrated by stereopticon views, entitled "Goitre, With and Without Hyperthyroidism," was most interesting and appears as an original article in this number of the JOURNAL.

ENTERTAINMENTS.

Every detail for the comfort and pleasure of the visiting physicians was perfectly planned and executed by the Committee of Arrangements, with that grand man, Dr. Giles C. Savage, as Chairman. Dr. Savage is the "Father" of the Association and he is very much interested in, and proud of, its success. He closed his offices during the three days' session, giving his entire time to the Association and to the visiting physicians; and, it is unnecessary to add, the efforts of the Entertainment Committee were successful and were greatly appreciated by every one. The entire medical profession of the city of Nashville treated the visiting physicians with great courtesy and kindness. Each entertainment was delightfully arranged and greatly enjoyed.

The reception and buffet luncheon at the Hermitage Hotel gave the visitors the delightful privilege of meeting the wives and fair friends of the Nashville doctors. A severe tonsillitis prevented the writer from attending this function, but those who were present were loud in their praises of the graciousness of Nashville's charming women. It was suggested that we should not wonder at the success of Nashville's physicians, having such lovely women for their inspiration.

The writer regrets that he was deprived of the visit to "The Hermitage," the historic home of Andrew Jackson, which was greatly enjoyed by those who were more fortunate. Southern doctors enjoy nothing more than a "barbecue" and the one provided on this occasion was said to have eclipsed them all. Another thing that Southern doctors delight in is genuine oratory, particularly when it is interspersed with good stories. On this occasion they had the privilege of listening to the greatest orator in American medicine, Dr. Witherspoon, who had for his theme, "Old Hickory," one of the most unique and interesting figures in American history. With "The Hermitage" as the stage setting, Dr. Witherspoon's description of Andrew Jackson and his life was so vivid that those who heard him went away feeling as though they had come in personal contact with that great American patriot.

REUNIONS.

Among the most pleasant features of the Nashville meeting were the reunions of the alumni of the Medical Department of Vanderbilt and the University of Nashville and Tennessee. Many classmates and

college friends, who had not seen each other for years, visited familiar scenes and lived over their college days. The Nashville and Tennessee Alumni enjoyed a theatre party and the Vanderbilt gave its Alumni an elegant banquet at the Hermitage Hotel. These college reunions were such a success it has been suggested that at future meetings of the Association there should be reunions of men from the different medical schools. A number of University of Virginia graduates, who enjoyed a luncheon together at Nashville, decided to issue a call for all Virginia men in the six Southern states to meet in Hattiesburg next year. The Johns Hopkins men intend doing likewise. The colleges near Hattiesburg will no doubt have many alumni at the meeting and they should also arrange for reunions.

THE COUNCIL'S REPORT.

The hardest worked men at the meeting were the Councillors, who held many meetings and discussed many matters of great importance to the Association. There were two ex-Presidents of the Association on the Council, Dr. H. H. Martin of Savannah, and Dr. B. L. Wyman, of Birmingham. The intense zeal and interest manifested by these two Ex-Presidents for the organization discredits the saying that "Presidents lose their enthusiasm after their terms of office expire." Dr. Martin was the first President of the Association and his loyalty and devotion to the Southern Medical Association, and indeed to everything Southern, and his great work in the upbuilding of our Association must excite the admiration of those who know this truly representative organization. He has had the greatest honors that can be bestowed upon a member of the Association, and justly so, for no one connected with it has spent more time, energy and, we may add, more money to make the Association a success than he. After the Nashville meeting Dr. Martin should feel that his labors have not been in vain.

The Council's recommendations are published in the proceedings of the general meetings and should be read by every member of the Association. We particularly appreciate the Council's kind references to the Journal. It is worth the work and sacrifice to receive such words of commendation, particularly when they were endorsed by our great Association.

DR. DOWLING'S RESIGNATION AS SECRETARY-TREASURER.

Very general regret was expressed at the resignation of Dr. Oscar Dowling as Secretary-Treasurer, because everyone feels that much of the success of the Association is due to his efforts. Dr. Dowling has been Secretary-Treasurer since the Association was organized. He has worked arduously and faithfully without compensation, and has spent his own money freely in building up the Association. He felt that his duties as State Health Officer of Louisiana would not allow him to devote as much time to the Association as would be necessary for an organization which has attained such proportions, but his zeal for and loyalty to the Association have not in the least diminished.

OFFICERS.

The methods for selecting the officers give but little opportunity for political "log rolling," and the fact that all the officers were elected unanimously shows that there is one organization in which there is practically no politics. The names of the officers are also given in the report of the general sessions. The officers for the ensuing year, with the exception of the Secretary-Treasurer, seem to the writer to have been a most happy selection. For the next year, at least, the Association's affairs are in the hands of men who will live up to their every obligation. We believe that the year 1911 will be one of great progress and that many new working members will be added before our next meeting.

HATTIESBURG IN 1911.

It was pleasing to the members to have had four different cities vieing with each other to secure the next meeting place, and the Association would be fortunate to hold its sessions either in Jacksonville, or Miami, Florida, or in Meridian or Hattiesburg, Mississippi. Hattiesburg was finally selected, and we believe wisely so, because it is near the geographical center of the section from which our membership is drawn, and being the home of Dr. Crawford, our retiring President, it goes without saying that everything possible will be done for the success of the meeting. Hattiesburg is one of the thriving cities of Mississippi, and the hotel accommodations are excellent. The Association has a large membership in Mississippi, and the railroad connections to Hattiesburg from New Orleans, Mobile, Memphis, Nashville, Birmingham, and Atlanta are particularly good, so that we anticipate a very large attendance next year.

FLORIDA IN 1912.

The membership from Florida, while not large, is enthusiastic—we hope to have it materially increased this year—and it seemed to be the sentiment of the physicians at Nashville that in 1912 we should visit the "Land of Flowers."

EXHIBITS.

The exhibitors made the gymnasium of the Young Women's Christian Association a most attractive place, and the exhibits were of unusual excellence, particularly those of the DeMoville Drug Company, Nashville, surgical instruments; Sharp & Smith, Chicago, surgical instruments; Fairchild Bros. & Foster, New York, pharmaceutical products; The Abbott Alkaloidal Co., Chicago, pharmaceutical products; The Devilbiss Atomizer Company; The Inhalatorium; Welch's Grape Juice Company; C. V. Mosby Company, St. Louis, medical books, and a number of other exhibits which were at the American Medical Association in St. Louis.

THE FUTURE.

The opening paragraph of the Council's report is significant of the future of the Southern Medical Association. It reads as follows: "The Council desires to congratulate the Association upon its progress during the past year. We feel that our Association has passed through the stage of doubt; that the need for an organization unifying the progressive medical profession in the South into one strong, active, working body has been demonstrated; and that the success of the Association up to this time means that Southern physicians and surgeons will perform an important part in the progress of American medicine and surgery, and be accorded their proper places in medical history."

Special Notice—Increase of Dues

Our readers, particularly the members of the Southern Medical Association, are urgently requested to read all of the proceedings of the Nashville meeting which are published in this number of the Journal. The report of the Council is of special importance, particularly that relating to the increase in dues from $2.00 *to* $3.00. *This, of course, includes subscription to the Journal. This notice has seemed necessary because, since the meeting, the Secretary-Treasurer has had a number of applications for membership, each enclosing* $2.00 *dues. It was found that the Association could not be kept free from debt and the Journal furnished the members with the dues at* $2.00. *Three dollars dues for an organization like the Southern Medical Association is certainly not too much and it seemed that the members at Nashville thought so, because the increase was made without a voice being raised against it, or a vote registered in opposition to the increase. A number of the Journal's friends say that the Journal alone is worth* $3 *or more. Indeed one of the leading medical editors in the United States recently told us that we should get* $3.00 *a year for the Journal; that we could not afford to publish*

such a Journal for less, particularly when we decline to advertise proprietary medicines which have not been approved by the Council on Chemistry and Pharmacy of the A. M. A. We will admit that the Gulf States Journal of Medicine and Surgery of Mobile, the Journal of the Southern Medical Association, of Shreveport, and the Southern Medical Journal, of Nashville, have never paid a cent to their editors, during all the years that they have been published. However, we hope and believe that, with the consolidation of the journals, Southern doctors will support a first class medical journal which is absolutely free from advertisements of proprietary medicines which have not been examined and approved by the Council on Chemistry and Pharmacy of the American Medical Association. Subscribers for the Journal who are members of their county or state medical societies may become members of the Southern Medical Association by paying $1.00 *more than the regular subscription of* $2.00. *We believe in the Southern Medical Association, and the Journal hopes to do its part in increasing the membership. We are therefore delighted to have our subscribers become members of the organization, which truly represents the practical and progressive medical profession of the South, and which is already the greatest medical association in the country, next to the A. M. A.*

The New President of the Southern Medical Association.

In electing Dr. Isadore Dyer, of New Orleans, its President for the ensuing year, the Southern Medical Association conferred as much honor upon itself as upon the recipient of its suffrages.

Dr. Dyer is a gentleman of international reputation. His professional work has been wide in scope, thorough in character, and marked by a minute attention to detail, which is one of the elements of genius.

His patient and complete investigation of leprosy has won for him an enviable distinction both at home and abroad, and his careful studies of pellagra have been of inestimable benefit, especially to the physicians of the South. His position as Dean of the Medical Department of Tulane University shows the high esteem in which he is held by the eminent physicians who constitute the faculty of that famous institution. His profound learning, ready wit and fluency of speech peculiarly fit him to act as the head and leader of great and important organizations. In securing the services of this brilliant gentleman as its standard-bearer for the ensuing year the Southern Medical Association has assured for itself a continuance and an increase of the flattering success that has attended its every effort.

Let us all start in afresh in the performance of our duties towards the only comprehensive organization of Southern physicians, each one determined that before the year expires he will add one more member to its roll. We owe this much to ourselves, to our Association, and to the scholarly, polished, charming gentleman who is now the head of the organization.

Post Operative Cystitis.

Most surgeons of ordinary experience know the humiliation of having a cystitis develop in patients who have undergone a pelvic operation. No matter how thoroughly the hands, the catheters and the external parts are cleansed and sterilized, the distressing cystitis may occur, and often when no catheter has been passed the inflammation develops, probably because of the weakened power of resistance to the attacks of bacilli already present in the bladder. Fortunately the cystitis is generally of brief duration, but this is not always the case. Sometimes it assumes a very severe and obstinate character and may degenerate into a chronic, almost incurable condition.

In the November, 1910, number of the *Illinois Medical Journal*, Dr. E. C. Dudley, of Chicago, has a very interesting article on this

subject. The conclusions he reached, after frequent annoyance by the accident, was that the blame was often unjustly laid upon the catheter when the fault lay in the viscus itself. He recalled the fact that before antisepsis was known the catheter was used as a routine practice, and even as a matter of mutual instruction among medical students, without thought of infection, and that irritable bladder was then cured by daily washing it out with saturated solution of boric acid, and after drawing it off, introducing 'four drams of a 20 per cent solution of argyrol and leaving it there to be passed off at the next urination." The measure was followed by the use of urotropin and the free drinking of water.

Acting upon the same principle that leads the physician to treat the eyes of the newly-born as a prophylactic precaution against ophthalmia. Dr. Dudley instituted the course of treatment above described as a prophylactic measure, whenever in operations a catheter was used, and the result was perfect immunity from post-operative cystitis.

Dr. Dudley says: "Since I have applied the routine treatment of post-operative cystitis to the prophylaxis of cystitis I have observed an unspeakable freedom from infection, and corresponding relief from a frequent and humiliating and distressing sequel to pelvic surgery.

The Food Value of Fish.

Once when the inimitable Mark Twain was playing editor to a daily paper there appeared in the column headed "Answers to Correspondents" an inquiry whether it was really true that a diet of fish was strengthening to the brain, and, if so, how much fish ought a man to eat daily to produce that result. Mark replied to the effect that though he had never noticed such a result in his own person, yet as he had heard the statement made all his life, and had never heard or read any denial of the proposition, he supposed there must be some truth in it.

As for the quantity of fish a person must eat to cause any discoverable increase of the mental powers he was not prepared to make any precise statement. However, he would answer the question to the best of his ability. Judging the mental requirements of the correspondent by his questions, Mark would venture to say that a whale would be enough to begin with; "not a large whale, you know, just one of moderate size."

In spite of Mark Twain's characteristic gibe there are still a great many people, and even a few physicians, who have a vague idea that as a food fish is very different in its nutritive qualities from any other form of animal nourishment, especially as regards its effect on the nervous system and the generative organs.

But the voice of "authority" seems to negative such a proposition. Thompson (Practical Dietetics) disposes of it as follows: "It is a popular fallacy that fish constitute a good brain food on account of containing a large percentage of phosphorus; but in reality many fish contain less of this element than meat, and neither Esquimos nor other aboriginal tribes who subsist largely upon fish are noted for intellectuality."

At the present time, when so many people of limited means find it burdensome to provide their families with either the quantity or quality of animal food they would like to, it is not amiss for the family physician to suggest that some kind of fresh fish might agree with ailing members in place of the costly porterhouse or tenderloin, or chicken, now daily required. The truth is that different fish have different food values, palatability and digestibility. Some are so poor in fat as to be dry and tough, while others are so saturated with fat as to be disgusting. Fish with white, succulent, tender meat are very digestible and nutritious when properly cooked, and may be given to patients recovering from fevers, to patients with albuminuria when convalescing, to those who have gout and chronic Brights' disease, and indeed may constitute the first solid animal food allowed after protracted illness. It should be boiled or broiled, but never, never fried. Of fresh water fish the

bass, brim, brook trout and shad are nicest and most digestible. From salt water the best are pompano, Spanish mackerel, red snapper and deep sea mullet, and there is no more wholesome fresh fish than the mysterious cod. All these, both from river and sea, have both fins and scales, and Moses has said no fish without both fins and scales is fit for human consumption, and the experience of centuries has generally shown in the long run that he was right in his hygienic propositions and objections. No fish is fit to eat after it has been kept so long that its eyes are sunken and its gills pale and flabby. True, the fish houses preserve them in frozen condition, sometimes for years, before they are marketed, but such fish does not constitute a wholesome diet. Sick people, or people with weak digestion, should never eat them, nor indulge in shrimp, crabs and lobsters.

Only the *"dura ilia messorum,"* so envied by old Horace, can manage them, even when fresh. When they have been kept out of the water twenty-four hours, unless alive or frozen, they often become deadly.

Fresh oysters, when they *are* fresh and in season, are both digestible and nutritious, though not much more so than the same quantity of good milk. The whole oyster may be eaten while it is raw. Before cooking in any manner for an invalid the hard muscle must be cut off and thrown away. When cooked that part becomes hard and indigestible. Clam broth is not only nutritious, but it is thought by many to possess the power, when taken hot, to overcome nausea and vomiting in a remarkable degree. Certain it is that sometimes it is at once retained by stomachs that have rejected every other form of nourishment for days. As a rule we are not sufficiently awake to the advantages afforded by the perch and bass of our streams or the cale fish of the salt waters in framing an acceptable dietary for patients with weak digestion or for convalescents. There are no stock and fruits on the finny flocks and herds that river and ocean bear, not so long as hooks and lines are cheap, worms crawl and poles grow along the waterside.

Anaphylaxis.

Continued investigations into the circumstances controlling the advent of anaphylaxis after the hypodermic injection of horse serum have added but little to the knowledge already gleaned from clinical experience, yet a brief return to the subject may help some of us to a better understanding thereof. For instance, a perfectly healthy man may receive a small injection of tuberculin and no reaction will follow, while a person suffering from tuberculosis would carry in his blood serum certain protective substances that would at once arouse a violent reaction were the tuberculin injection given to him. That reaction is a true anaphylaxis.

In like manner the blood serum of a horse, when injected into the tissues of a human being, would cause the blood to generate enough of a protective agent to dispose of that serum, but slowly, as it must be manufactured. But human blood does not stop making the antidote when enough for the purpose has been provided, it keeps on making it; so that in from seven to twenty-one days after the first dose of horse serum, if a second dose be injected, this protective body will meet it, and the reaction which ensues, and which we call anaphylaxis, may be very violent, even to the causing of sudden death

Fortunately the occasions for thus using horse serum are very few, and the individuals who suffer with such an idiosyncracy are fewer still, indeed are rarely met.

Sometimes fatal anaphylaxis is produced by the first injection of horse serum. This is in the case of such as cannot inhale the dust from a horse or horse stable without coughing or sneezing a great deal, more especially if such contact causes asthma. Such persons can never safely be injected with horse serum.

It has been found that where the animals experimented on with second injections were first treated with atropin, rectal injections of chloral and urethane, or were anesthetized

with ether or alcohol, these drugs were found to exert more or less of a protective influence.

Another fact of interest established is that the presence or absence of diphtheria antitoxin in the horse serum has nothing to do with the production of anaphylaxis.

Anti-Typhoid Inoculation.

This is a subject of intense interest to every physician. It concerns his own private patients or even the members of his family.

Years ago, during the Boer war, many of the British troops received the protective inoculation against typhoid fever, but owing to many reasons, some of which are now forgotten, the practice fell into disrepute and was virtually abandoned.

Under the auspices of the United States Government the work of investigation was resumed and vigorously, though quietly prosecuted. At present many thousands of men in various national armies are thus protected, but private practice is a field wherein little of note has been undertaken in this line.

In our army (U. S.) among 10,000 inoculated men there developed only fifty-six cases with five deaths, while in 8,000 men who were not inoculated a total of 272 cases with forty-six deaths arose—within the same period of time.

Recently we had the opportunity of observing four persons, who had been exposed for some weeks to a virulent case of typhoid, and who were given injections of the killed cultures of the bacillus typhosus. The reaction was slight in all of them and none contracted the disease.

Reaction from inoculation is slight, sometimes not any at all, especially in women and children. When it occurs it is in from four to six hours after the injection, varying from slight headache and malaise to chill, fever, etc. The severe reactions following only about one case in two hundred. A previous attack of typhoid may intensify the reaction, and so does alcohol. Three doses are required. The first injection, half a cc, containing 500,000,000 dead organisms, is injected into the subcutaneous tissue over the insertion of the deltoid at 4:00 p. m., so that the reaction, if any, may occur at night, and be over with by morning. The second and third injections are twice as large as the first, intervals of ten days being allowed between each dose and its successor. The foregoing is condensed from an editorial in the *New York Medical Journal*, issue of October 29, 1910.

It concludes as follows: "From an analysis of the results obtained in the armies of Germany, Great Britain, and the United States we find that inoculation against typhoid fever undoubtedly diminishes the susceptibility to the disease; that it decreases the mortality in those who do become infected; that it protects regardless of hygienic surroundings; that its protective effects last many months; that it is easily carried out and is only rarely associated with unpleasant symptoms; that there is no evidence in experience for the belief that it even temporarily increases the susceptibility to the disease; and, lastly, that no untoward results have as yet been seen. If under these most severe tests this procedure has produced such uniformly good results, why have we not in it a practicable and effective means of combating typhoid fever in war and in peace? Why should we not look hopefully for the time when its use may be as general as that of vaccination against variola now is?"

Death of Mrs. J. F. McKinstry.

The many friends of Dr. J. F. McKinstry, Jr., of Gainesville, Fla., will unite with the editors of this Journal in their sympathy with him in his recent great bereavement, the loss of his devoted wife.

She was a true doctor's wife, active in all beneficent and charitable work yet thoroughly domestic. Whenever her husband attended the meetings of medical associations she accompanied him. In recognition of her great worth all business was suspended in Gainesville and the stores were closed at the hour when she was laid to rest beside the four little ones who had gone before. In the

presence of such grief as his words are idle for comfort, but they are all the means we have to express our sympathy.

Only simple faith and constant work can bring surcease to such sorrow.

Words of Encouragement.

Below we quote a few of the many encouraging expressions such as are coming to us every day. Many of them are merely the closing sentences of business letters, which accounts for their somewhat abrupt form of expression. Some of the following letters have appeared in the *Gulf States Journal of Medicine* and we reproduce them in order to show our new readers what our old friends think of us.

Dr. Lawrence H. Moore, Orrville, Ala., says: "I enjoy the Journal and find it a great help. It is indeed a credit to this Southland of ours."

Dr. M. Coghlan, Tensaw, Ala.: "The Journal should have the cordial support of every physician in Alabama, not only for patriotic reasons, but also for its very great intrinsic merit."

Dr. D. W. Jones, Councilor, S. M. A., Brookhaven, Miss.:

"Editors Journal: I have been thinking for sometime that I would write to you and express my appreciation of the Journal of the Southern Medical Association, especially of the recent editorials, and the improvement in the advertising pages. You certainly deserve encouragement in your efforts to make this a representative journal of the Association."

Dr. John Howland, Columbia University (member A. M. A. Council, Pharmacy and Chemistry), New York:

"Editors Journal: It is very gratifying to feel that the work of the Council is appreciated. I wish to congratulate you on the stand that you have taken with regard to the Gulf States Journal. It is, I feel sure, eminently the proper one and will greatly redound to the credit of your journal."

Dr. Hiram Byrd, Assistant State Health Officer, Jacksonvile, Fla.:

"Editors Journal: I thank you heartily for the copy of the Gulf States Journal of Medicine and Surgery. It is quite breezy. Please allow me to congratulate you upon your position with reference to proprietary medicines. I bid you good speed."

Dr. Frank A. Jones, Memphis, Tenn.:

"Editors Journal: * * * I am gratified to note the position the Journal has taken. Your efforts should be encouraged and stimulated by every Southern physician. My efforts and *pocket book* are at your command in making the Southern Medical Association and the Journal bulwarks for high class ideals in 'top notch' medical thought."

Dr. L. E. Starr, Camden, Ala.:

"I desire to congratulate you upon your success in the production of the Journal. It far surpasses anything of the kind that we have ever had in the South."

Dr. D. A. Webb, of Scranton, Pa., says:

"Editors Journal: Enclosed find $2.00, my subscription fee to your Journal. Though necessarily not particularly interested in the medical problems of the South (having troubles of our own), I would hereby show—in more than empty words—my appreciation of your 'heroic' resolve to eliminate from your ad. space 'unworthy medicinal products.' Such resolve—deliberately and knowingly put into execution—is as rare as 'tis imperatively needed.

"Now, let us watch closely other medical journals, and see whose servants they are, or whose interests come first—the doctors' or the manufacturers'.

"If they but courageously 'plant their standard on the heights' as have you, they will learn that there are enough M. D.'s in America ready to compensate for the loss of 'un-

worthy ads.' Let you editors get together, bye-gones be bye-gones, and in future turn to your own and quit the new-found for the old reliable brothers, whose money can cause no qualm of conscience, and whose friendship and moral support is worth more than all the tainted coin of the scoundrels. More power to your pen, brothers. You will not fail; remind us p. r. n. of your struggles; we'll carry you over 'Debt and Rubicon.'"

Dr. H. H. Martin, Savannah, Ga.:

"Editors Journal: * * * I cannot close this letter without expressing to you my heartiest approval and commendation of the attitude of your Journal toward the proprietary medicine interests. The practicing physician has neither the time nor inclination to make a personal test of every proprietary medicine that he hears or reads of, and the American Medical Association has provided a committee for that purpose, and the attitude of every progressive physician should be hostile to all proprietary medicine interests who are not willing to submit their products to the Council on Chemistry and Pharmacy of the A. M. A. for approval. I also wish to commend most heartily your editorial in the May number on the 'American Druggists' Syndicate,' another combine of commercial interests against the welfare of the physician.

"I fully appreciate the sacrifices you have made in placing yourselves in this most commendable attitude, and so long as your Journal pursues the policy outlined in your June editorial, it is deserving of the active support of every physician in our section. Even though they do not care to join the Southern Medical Association, they should all be proud to be subscribers to such a Journal."

Dr. John McDiarmid, of DeLand, Fla.:

"Editors Journal: Please accept this note as a wireless handshake, a shake of both hands, or even your whole anatomy, in congratulation for the high standard you have set for the Journal of the Southern Medical Association.

"Southern doctors have realized for a long time that the Gulf States Journal of Medicine and Surgery was ably edited, but the moral palate of the average conscientious physician is too sensitive to relish the dope thrust upon it by unscrupulous proprietary medicine fakes in your advertising pages, and, as a book or periodical is no cleaner than its 'yellowest' page, many of your fellow practitioners and personal admirers and friends cast the Journal aside with the remark: 'I'l none of it.'

"But, now as the scene is changed and the Journal comes under the pure article law, I am sure that a largely increased circle of readers will accept your resolution in the same spirit in which you offer it, and cheerfully render whatever assistance they can in making the Journal a signal success."

From Dr. Harvey W. Wiley, Washington, D. C., (of pure food and drug fame):

"Editors Journal: I congratulate you most heartily on the stand you have taken. I feel certain that your action will be speedily followed by practically all of the reputable journals of this country. I sincerely hope that your stand will not interfere with your income. It would be a sad commentary on public affairs if we should have to write in this country the phrase, 'It doesn't pay to be honest.'"

Dr. W. W. Crawford, Hattiesburg, Miss., President S. M. A.:

"Editors Journal: Am pleased to note that you have adjusted the Journal matter and will be in position to control every detail connected with it. It means that we are to have an official organ that will rank second to none. It means that our Association shall have a channel for expansion that will guarantee an organization that shall be the pride of the profession of all of the South. I think your editorial is a strong one, and ought to place the matter in the proper light before the profession."

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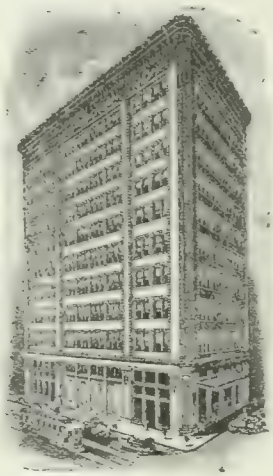

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There is no possibility of poisonous effect through the absorption of Listerine.

Listerine Dermatic Soap is a bland, unirritating and remarkably efficient soap.

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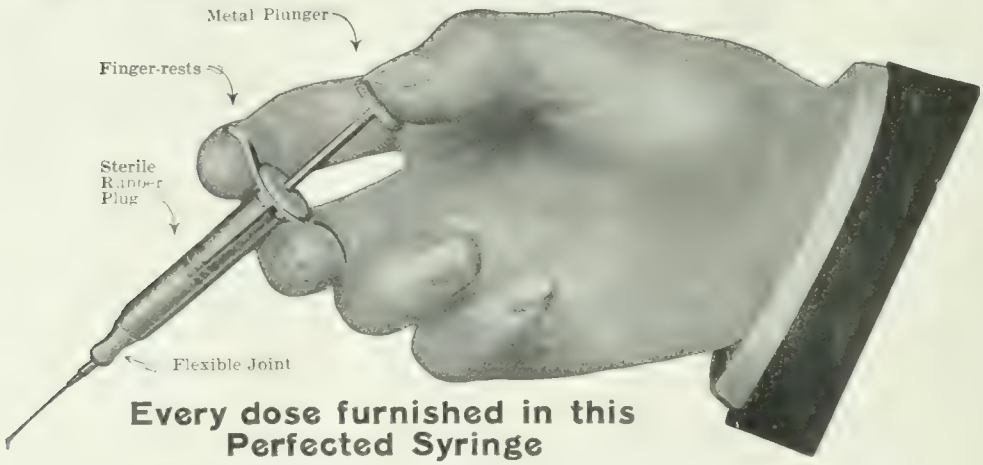
"The Inhibitory Action of Listerine," a 128-page pamphlet descriptive of the antiseptic, and indicating its utility in medical, surgical and dental practice, may be had upon application to the manufacturers, Lambert Pharmacal Co., Saint Louis, Missouri, but the best advertisement of Listerine is . . . . . .

LISTERINE

Mulford's Antitoxin

and the New Syringe



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Positive Working: The metal plunger screws into the rubber plug, adjusting pressure and making action positive.

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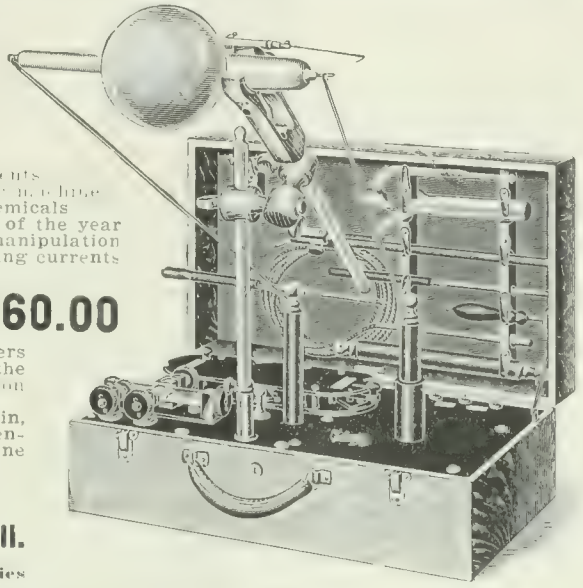

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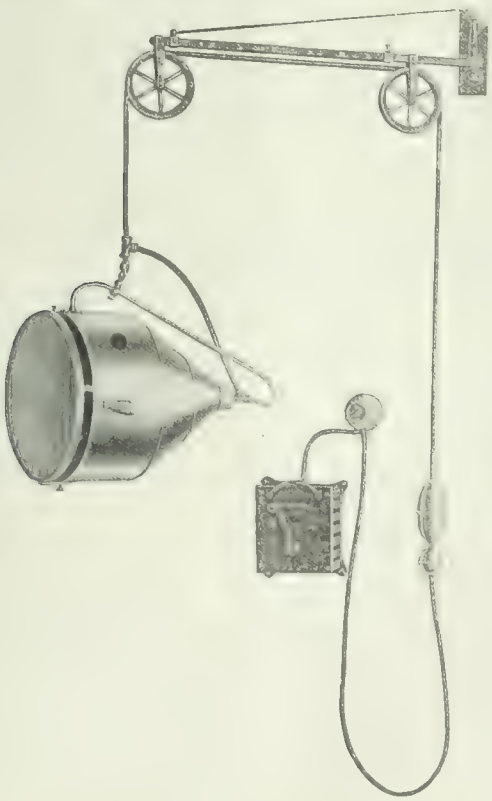

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that light from the upper (violet) end of the spectrum and light from the lower (red) end produce opposite therapeutic effects, will give you an inkling as to the possibilities of

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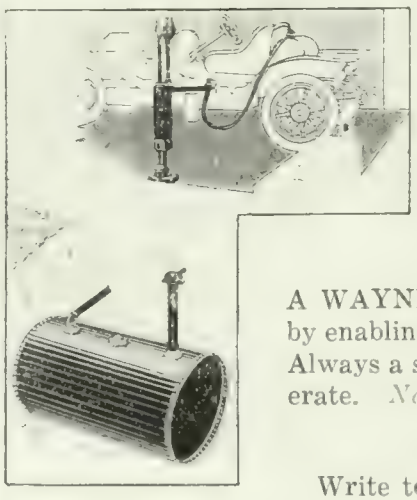

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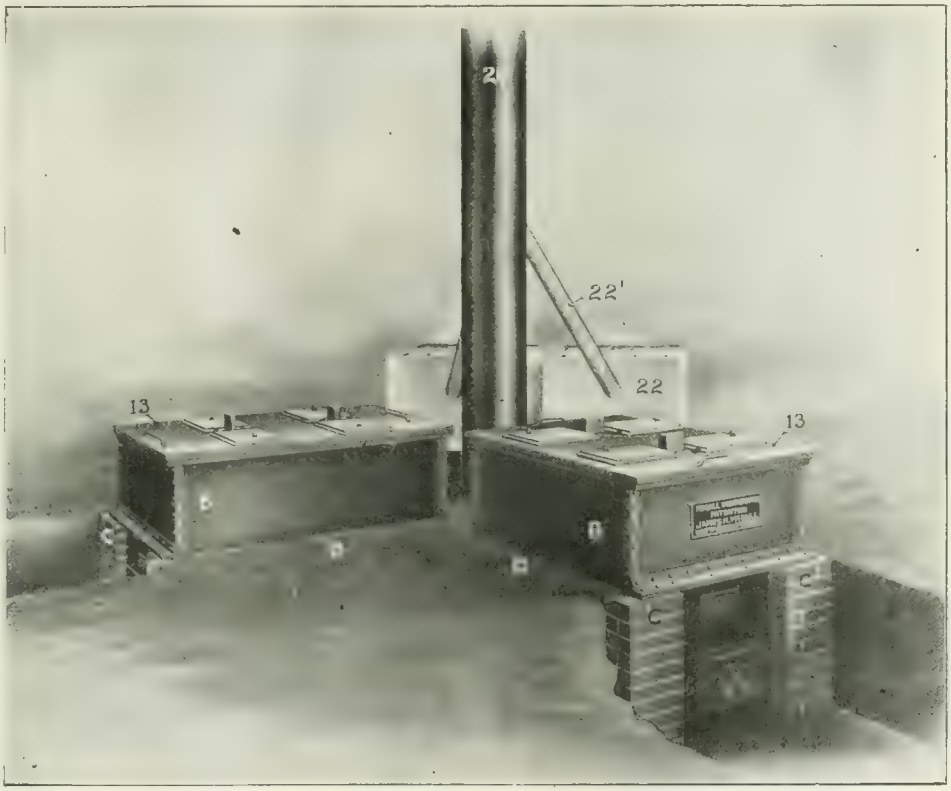

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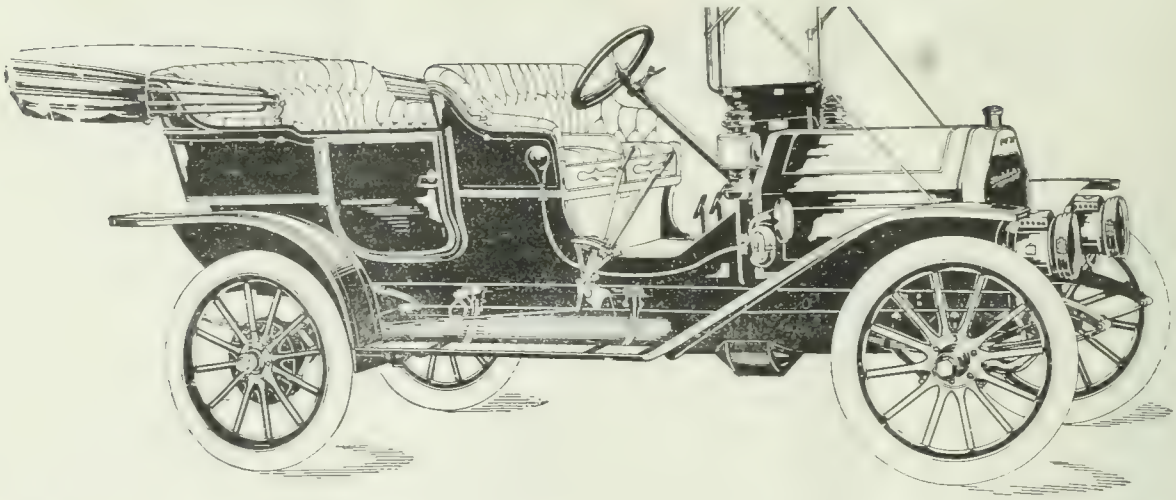

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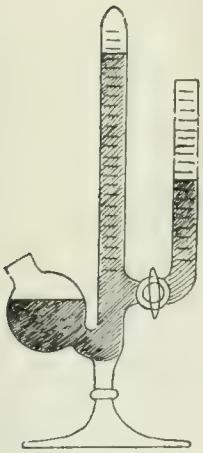

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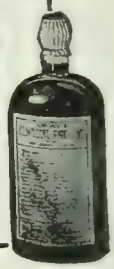

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It is the same pleasant, gentle laxative, however, which for many years past physicians have entrusted to domestic use because of its non-irritant and non-debilitating character, its wide range of usefulness and its freedom from every objectionable quality. It is well and generally known that the component parts of Syrup of Figs and Elixir of Senna are as follows:

Syrup of California Figs..... 75 parts
Aromatic Elixir of Senna, manufactured by our original method, known to the California Fig Syrup Company only ..... 25 parts

Its production satisfies the demand of the profession for an elegant pharmaceutical laxative of agreeable quality and high standard, and is therefore a scientific accomplishment of the highest value, as our method insures that perfect purity and uniformity of product required by the careful physician. It is a laxative which physicians may sanction for family use because its constituents are known to the profession and the remedy itself proven to be prompt and reliable in its action, acceptable to the taste, and never followed by the slightest debilitation.

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In other words, SABALOL SPRAY may be relied upon to destroy invading germs, arrest the inflammatory process and restore the tissues attacked to a normal condition.

Experience has proven beyond all controversy that SABALOL SPRAY has merits distinctively its own that make it one of the most effective local remedies for the successful treatment of nose and throat affections. *Samples on request.*

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The well recognized advantages of this product come from the **quality of its ingredients, its absolute purity, constant uniformity, remarkable therapeutic efficiency,** and **non-secrecy.**

In indicated dosage, Bromidia is unrivalled as a safe and reliable hypnotic.

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A faithfully prepared, long-tried, uniform preparation.

Reject < Worthless substitutes. Preparations "Just as Good."

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depends not alone upon its remarkable pain-relieving properties, but also on its complete freedom from the narcotic and toxic action common to other opiates. *PAPINE* does not nauseate, constipate nor create a habit. It has, therefore, no contraindications of age or physical condition.

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In the Treatment of

Acute Urethritis

no local remedy is so uniformly effective as

Pinus Canadensis Kennedy

A tablespoonful to a half glass of water, as hot as can be borne, makes an injection of the greatest possible value, not only for promptly controlling pain and inflammation, but for permanently overcoming discharge—especially in the declining stages and often when other remedies have failed completely.

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Few remedies give more prompt and satisfactory relief from sore throat than Pond's Extract. A tablespoonful to a half glass of hot water used as a gargle or throat wash every hour or half hour, quickly reduces pharyngeal congestion and inflammation, and rapidly removes pain and soreness.

In prescribing or using Pond's Extract the practitioner is assured of a purity, quality, uniformity of strength and therapeutic potency rarely if ever found in unidentified extracts of hamamelis.

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POWERFULLY ALTERATIVE AND ANTISEPTIC

ULCERO CRUSTACEOUS SYPHILIDE

SHOULD BE FREQUENTLY PRESCRIBED IN

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A scientific and comprehensive booklet, explaining the indications and methods of use of these products, together with samples for clinical test will be sent on request.

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with their train of symptoms pointing to faulty or perverted metabolism, demand remedies capable of readjusting normal cell processes. Of these

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Beckmann's formula
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Bordet-Gengou reaction
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Capriloquism
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Cholesteron
Clonorchis
Code of medical ethics
Conariohypophysial tract
Contract-surgeon
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Decerebrate rigidity
Degreased tubercle bacilli
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Diacetyl peroxide
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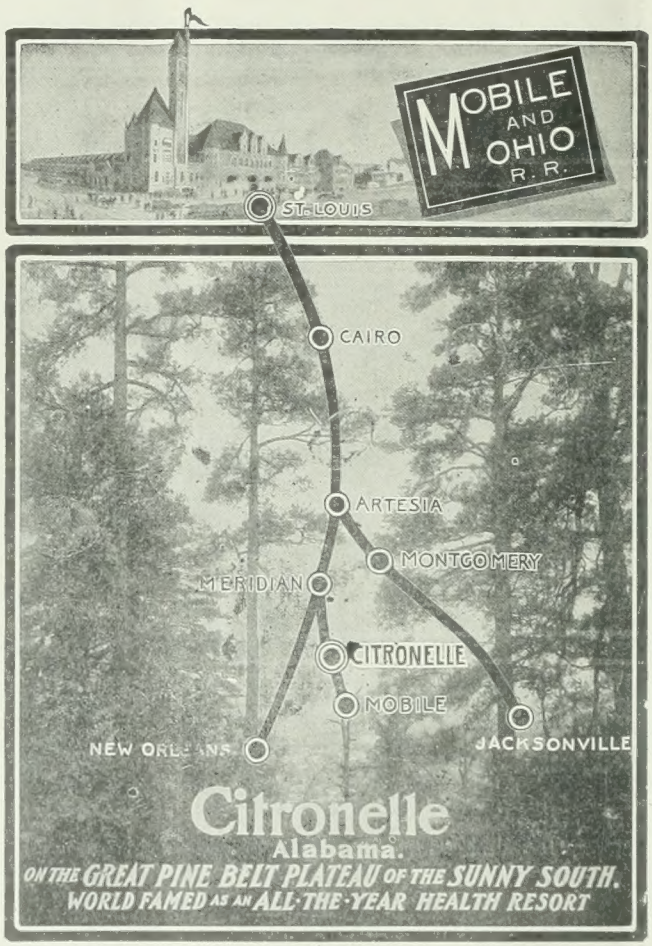

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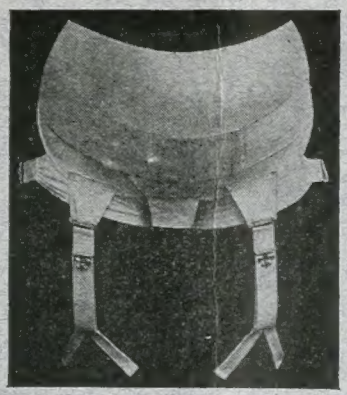

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